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### II

## FOREWORD.

THE Yearbook for 1921 is a departure from previous Yearbooks. It represents an effort to present in a somewhat detailed way the economic situation with respect to four of our principal agricultural products—wheat, corn, beef, and cotton. The subject is treated in four separate chapters. These discussions take the place of the briefer, less comprehensive articles, chiefly on production subjects, presented in previous Yearbooks. A graphic summary of the agricultural census of 1920 is added, and the statistical section has been strengthened by the inclusion of cost of production data and by some new statistics of marketing and production.

The Yearbook for 1921, therefore, emphasizes the economic side of our agriculture, because help in their economic problems is now the most urgent need of our farmers. That is not to say that the Department of Agriculture is losing sight of production matters. The farmer needs all the help in his production problems that the department and the agricultural colleges and experiment stations can give him, but the thing of most importance now is the development of an entirely new realm of organized knowledge bearing upon the economic factors of agriculture, looking toward cheaper production, improved methods of distribution, and the enlargement of markets, all to the end that prices the farmer receives shall be more fairly related to his cost of production.

While the present volume treats only of four phases of the situation, succeeding volumes will take up other products and conditions, so that in the course of a few years a fairly complete picture of the whole economic situation may be presented.

It is hoped that the discussions in this book, which have been prepared with a great deal of attention to accuracy and clearness, will contribute something to a better understanding of the serious economic problems which must be met if our agriculture is to be established on a sound, enduring basis.

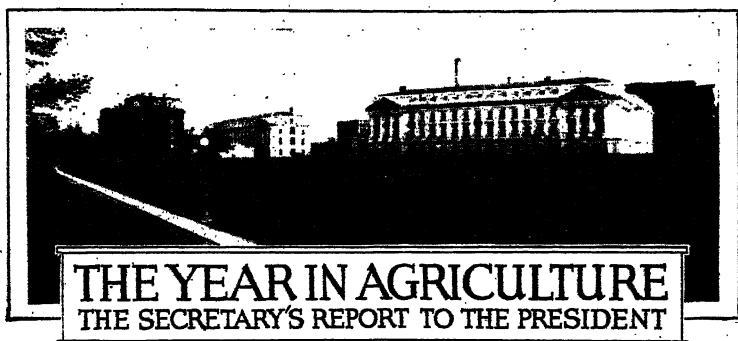
HENRY C. WALLACE,  
*Secretary of Agriculture.*



## CONTENTS.

|   | Page |
|---|------|
| The Year in Agriculture-----  | 1    |
| H. C. WALLACE.  |      |
| Wheat Production and Marketing-----   | 77   |
| C. R. BALL, C. E. LEIGHTY, O. C. STINE, and<br>O. E. BAKER.                 |      |
| The Corn Crop-----  | 161  |
| C. E. LEIGHTY, C. W. WARBURTON, O. C. STINE, and<br>O. E. BAKER.            |      |
| Our Beef Supply-----  | 227  |
| E. W. SHEETS, O. E. BAKER, C. E. GIBBONS,<br>O. C. STINE, and R. H. WILCOX. |      |
| The Cotton Situation-----   | 323  |
| A. M. AGELASTO, C. B. DOYLE, G. S. MELOY, and<br>O. C. STINE.               |      |
| A Graphic Summary of American Agriculture-----                              | 407  |
| O. E. BAKER.  |      |
| Appendix:   |      |
| Statistics of Grain Crops, 1921-----  | 507  |
| Statistics of Crops Other than Grain Crops-----                             | 581  |
| Live Stock, 1921-----   | 675  |
| Imports and Exports of Agricultural Products--                              | 737  |
| Miscellaneous Agricultural Statistics-----                                  | 770  |
| Cost Data for Farm Products-----  | 804  |
| Index -----   | 847  |





WASHINGTON, D. C., *November 15, 1921.*

To the PRESIDENT:

Before reporting in detail on the work of the Department of Agriculture during the past year, it seems proper to speak of the condition of agriculture in the Nation. The experiences of recent years have shown more clearly than ever before that an efficient agriculture is of vital importance to all the people. During the darkest days of the war success or failure turned on an adequate food supply. Every discovery that reduces the cost of production or increases the efficiency and economy of distribution of farm products benefits all consumers. Any circumstances which depress agriculture, making it impossible to exchange products of the farm for the products of the factory on a fairly normal basis, make for closed factories and unemployment in industries. The promotion of our agriculture is, therefore, in the interest of all the people. Conditions which are harmful to the producers and which tend to jeopardize future production must be noted with concern by all of our people and the national energy should be turned toward improving such conditions.

The farmer receives his money wages in the form of payment for his crops and live stock. These wages are not paid regularly every week or every month, except in part in the case of some dairy farmers, but at irregular intervals varying from three months to a year or more, depending upon the nature of the crop. Neither rate of wages nor hours of work is agreed upon in advance. The consuming public pays, but it makes no agreement as to the amount it will pay. The farmer is urged to produce abundantly, but the price



paid him for what he produces is set after the amount of his production is known. The buyers drive the shrewdest possible bargain. The more the farmer produces, the less the buyers want to pay. Thus we have large production penalized. Very often—indeed, it is the general rule—a

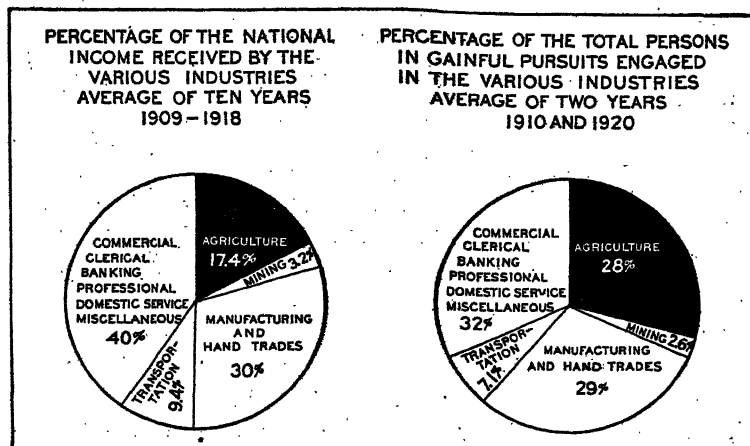


FIG. 1.—Twenty-eight per cent of the people of the United States gainfully employed are engaged in agriculture, but they receive only about 17 per cent of the total national income. The average annual per-capita income of the people engaged in agriculture during the 10 years 1909-1918 was only a little over half that of the people engaged in the other major industries. These figures are taken from the U. S. Census of Occupations and from a survey of "Income in the United States," prepared by Mitchell, King, MacCauley, and Knauth, and published by the National Bureau of Economic Research.

large crop brings the farmer fewer total dollars than a small crop. And often a large crop sells at less than it costs the farmer on an average to produce it. Such is the condition this year. The energy and the intelligence with which the farmer works, the number of hours he works, the cost he incurs in producing crops—none of these is considered in determining the price.

### Farmer Produces on Faith.

The farmer, therefore, must work on faith. He must himself carry all the risks of weather, of heat and cold, of flood and drought, of destructive storms, of insect pests, and plant and animal diseases. He must plant enough to make sure that there will be food for all, with the practical

NOTE.—Illustrations added since original edition of this report; statistical tables revised.

certainty that in unusually favorable seasons the result may be a large surplus, and that this surplus, which can not be hidden, probably will cause prices lower than the actual cost of production. He must be willing to accept these low prices with the best grace possible and adjust his living expenses to meet his reduced income. The American farmer always has done this. He is a philosopher, as every man must be who works with nature and is subject to nature's varying moods. And he feels his responsibility to feed the people. If the farmers of America should cease work for a single crop season, millions upon millions of people would suffer for food. They have never ceased to work, no matter what the trials and hardships.

In an orderly world the farmers are able one year with another to so adjust their production to the needs of consumption as to enjoy a fairly reasonable share of the national prosperity. During the period of development when farm land is increasing in value, landowners look upon the enhanced value of their land as accumulated compensation to offset unprofitable crop years. This thought has consoled them under many distressing conditions of crop failures and low prices. As they advance in age and come to the time when they must cease hard work, they have been able to profit by this accumulated value either by sale of the farm or by renting on the basis of value. The people of America have until very recent years been fed at a price below the actual cost of producing farm crops, if all of the factors which properly enter into that cost are considered and if the farmer should be allowed a wage no larger than the wage paid for the cheapest labor. In the case of the investor or speculator, increase in the value of farm land may be unearned increment. In the case of the farmer it is earned increment.

### **Farmer Feels Responsibility to Public.**

The farmer must carry also those risks, due to changes in business, both at home and abroad, which influence the demand for farm products; that is, his prices are influenced by the ups and downs of business over which he has no control. In periods of disturbance, which interrupt foreign trade or interfere with home industries and thereby decrease demand for farm crops, the farmer suffers through the

reduction of his wage by decreased prices for his crops. When such periods come at a time when the cost of production is unusually high, and especially if one bad year has followed another and thus finds the farmer heavily in debt because of the losses of the previous year, the result is serious and makes trouble for the farmer and everyone else. But

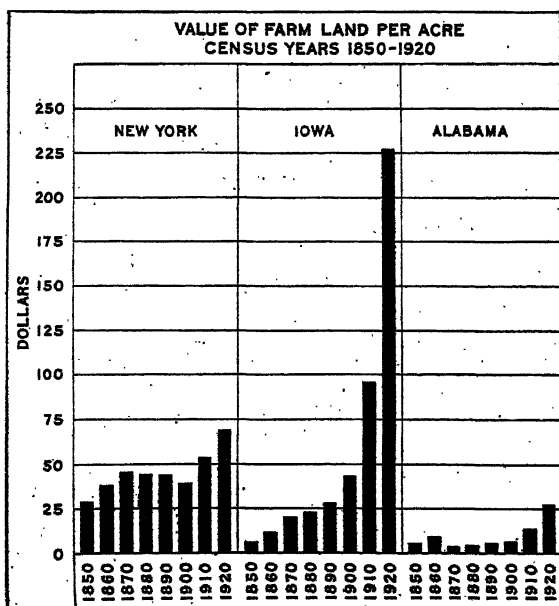


FIG. 2.—The average value of farm land (including buildings) in the United States increased between 1850 and 1920 at a rate equivalent to compound interest on the 1850 valuation of 2.65 per cent. The increase from 1900 to 1920 was at the rate of 6.47 per cent. For New York the annual rate of increase in value was 1.25 per cent for the period 1850-1920, and 2.87 per cent for the period 1900-1920; for Iowa 5.31 and 8.04 per cent, respectively, and for Alabama 2.40 and 7.52 per cent. Since 1920 land has declined in value in most parts of the United States, and this large contribution to the farmer's wealth from appreciation in land values can not be expected to continue.

the farmer always works. He always produces. He grows food in abundance.

The crops of the year 1920 were produced at the greatest costs ever known. These costs were justified by prices which prevailed at planting time. They were incurred willingly because the farmers had been told over and over again that overseas there was a hungry world wait-

ing to be fed and that there would be a strong demand for all they could produce. The production was large; the farmers worked very hard, and climatic conditions favored good crops. But before the crops were harvested prices had so decreased that at market time the crops sold for far less than the cost of production, considering the country

as a whole. Hundreds of thousands produced at heavy financial loss.

### Disproportionate Reduction in Farmers' Income.

The farmers had taken it for granted that war prices could not continue. They had expected lower prices for their own products. They had not thought that their prices would drop as low as they did, but during the winter they accepted these very low prices with their usual philosophy. They borrowed more money to keep themselves going, and in the face of a continuing decline in prices of almost all of their

#### INCREASING EFFICIENCY OF THE AMERICAN FARMER



| NUMBER OF PERSONS ENGAGED<br>IN AGRICULTURE, 1909 AND 1919                                      |   | YEAR OR<br>PERIOD | PRODUCTION OF ALL CEREALS<br>AVERAGE 5 YEARS<br>1907-11 AND 1917-21 |      |
|---|---|-------------------|---|------|
|  FARM LABORERS |  FARMERS |                   |   |      |
| 6,003,731   | 6,361,502   | 1909<br>1907-11   | 114,410,734   | TONS |
| 4,210,938   | 6,448,343   | 1919<br>1917-21   | 133,919,830   | TONS |

FIG. 3.—The number of persons engaged in agriculture decreased from 12,386,000 in 1910 to 10,659,000 in 1920, according to the Census of Occupations; but this decrease occurred wholly in the number of farm laborers, and is accounted for, in part, by the change in date of enumeration from April 15 to January 1. A real decrease, somewhat smaller than that indicated by the census, probably has occurred, however, in the number of farm laborers. But assuming that the number of persons engaged in agriculture was the same in 1920 as in 1910, there was an increase in production of the cereals per person engaged in agriculture of 17 per cent during the decade. This increase in efficiency was achieved by using more machinery, fertilizer, and other forms of capital; in other words, through bigger farms and better farming.

crops they put out ample acreage in the spring of 1921. At that time prices of farm products were much below the cost of production and far lower relatively than the prices of other commodities. The farmers' wages had thus been reduced to about the prewar level, but the wages of other people, whether paid direct or through the products of their work, remained very near the war level and from 50 to 100 per cent or more above the prewar level. This was a disturbing condition, but the farmer hoped and had a right to expect that by the time his crops of this year were ready for market other workers and other manufacturers, for the farmer is both, would be willing to accept their share of the

burden of economic rebuilding and that the prices of other things, including wages, which have the greatest influence on such prices, would come down to a fairer and more nearly normal relation to the price of farm products. There was no attempt on the part of the farmers to restrict production. In some cases, as with the cotton farmers of the South, there was an effort to readjust acreage by substituting one crop for another. But it can not be said that the farmers of the United States combined to hold up their wages. They showed their good faith and their sense of responsibility in trying times by planting plentifully, reducing their own expenses in every possible way, and working harder and longer hours. As in war time, many women and girls worked in the fields because reduced income made impossible the employment of other help. As the result of large acreage, very hard work, and a favorable season, the crops of 1921, while not as large as in some years, yielded more than we need for our own use, but prices are most unsatisfactory. Accompanying this report is a table showing the acreage and yields in detail.

### Surplus Needed by Hungry Peoples.

Had some way been found for the people in need to buy our surplus at prices which would cover the cost of production the American farmer would have been prosperous and the country would have prospered with him. It is a terrible indictment of modern civilization that with such abundance here there are millions of people overseas suffering for the bare necessities and other millions starving to death. And surely we are sadly lacking in our understanding of economic laws or in our adjustment to them when the production of bounteous crops grown by the hard labor of 12,000,000 farmers and farm workers and their families is permitted to play such a large part in paralyzing our industries and business at home. For that is what has happened. The purchasing power of the principal farm crops of the year 1921 at the present time is lower than ever before known. In times past some of these crops have sold at lower prices per sale unit expressed in dollars and cents, but probably never before have our farmers generally been compelled to exchange their crops per sale unit for such small amounts

of the things they need. The purchasing power of our major grain crops is little more than half what it was on an average for the five prewar years of 1910-1914, inclusive.

When we remember that approximately 40 per cent of all our people live in the open country and are dependent upon what grows out of the soil, the baneful effect upon the Nation of reducing the purchasing power of that 40 per cent so far below normal is obvious. The farmer is compelled to practice the most rigid economy, to wear his old

clothes, to repair his old machinery, to refrain from purchasing everything he can possibly do without, and to deny himself and his family not alone luxuries but many of the ordinary comforts of life. This in turn has forced the manufacturer to restrict his output to the lessened demand, reducing his own purchases of raw material, and greatly reducing the number of his workmen. Men out of work must

live on their savings and are in turn compelled to practice economy by reducing their own buying, and thus still further restrict the farmers' market. And so we find ourselves in a vicious circle which we are having difficulty in breaking through.

#### Effect of High Freight Rates.

Nor is the foregoing a complete tale of the difficulties and discouragements of the farmer. The cost of getting farm

#### FORTY PER CENT OF ALL OUR PEOPLE LIVE OUTSIDE INCORPORATED PLACES, MOSTLY ON FARMS

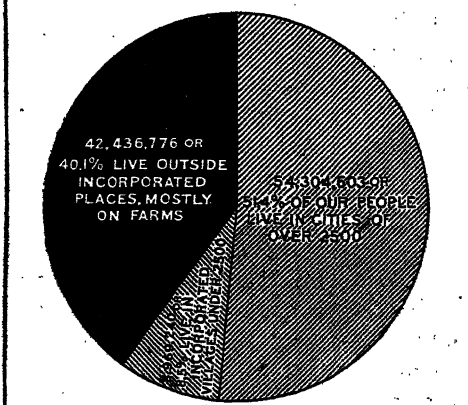


FIG. 4.—Forty per cent of our people live outside incorporated places, practically all in the open country. Over 8 per cent more live in villages of less than 2,500 population, mostly retired farmers or tradesmen who are dependent upon the farmers for support. Nearly half of our population is agricultural or directly dependent upon agriculture.

products from the farm to the consumer's table has increased tremendously during the past three years. The freight charge is very nearly doubled, and in some cases more than doubled. When wheat was selling at \$2.50 per bushel, corn at \$1.75, cattle and hogs at \$16 to \$22 per hundred, cotton

**DIVISION BETWEEN THE FARMERS, THE ELEVATORS, AND THE RAILROADS OF THE PROCEEDS OF A CARLOAD OF CORN SHIPPED FROM SIOUX CITY, IOWA, TO CHICAGO**

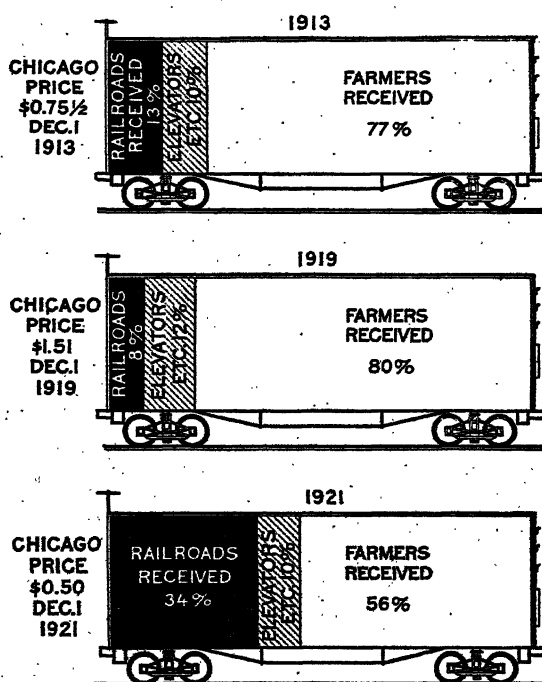


FIG. 5.—Sioux City is only 500 miles from Chicago, yet the price of corn was so low in the autumn of 1921, and the freight rate so high, that the farmer in north-western Iowa who shipped corn to Chicago received only a little over half the Chicago price. The elevator charges include commissions and other items—practically the entire spread between the farmer at the local elevator and the purchaser on the Chicago market.

poses a burden grievous to be borne. When farm prices are ruinously low any addition to the freight charge means added distress. At the present time the cost of getting some farm products to market is greater than the amount the farmer himself receives in net return. And the heaviest freight

at 30 cents per pound, the increased freight rate was not a serious matter. It amounted to but few cents relatively and was a small item in the total price. But with wheat at \$1, corn at 48 cents, cattle and hogs at \$7 to \$10 per hundred, cotton at 17 to 20 cents (all these being primary market prices, not farm prices), the addition of even 10 cents per bushel or per hundred pounds im-

burden naturally falls on those farmers who live in our great surplus-producing States.

Not only do the very large advances in freight rates impose a heavy burden on the producers of grain and live stock, cotton, and wool, but on the growers of fruits and vegetables as well. Indeed, some of the latter have been compelled to see their products waste in the fields because the prices offered at the consuming markets were not large enough to pay the cost of packing and transportation.

This transportation matter is one of vital importance to agriculture. The country has been developed on the low long haul. Land values, crops, and farming practices in general have been adjusted to this development. Large advances in freight rates, therefore, while bearable in a time of high prices, if continued are bound to involve a remaking of our agricultural map. The simple process of marking up the transportation cost a few cents per hundred pounds has the same effect on a surplus-producing State as picking it up and setting it down 100 to 300 miles farther from market. Agriculture is depressed until the rates are lowered or until population and industry shift to meet this new condition. Any marked change in long-established freight rates, therefore, means a rearrangement of production in many sections and for a time at least favors some areas at the expense of others.

### **Freight Rates and Foreign Competition.**

More than this, inasmuch as our heavy consuming population is massed so largely near the eastern coast and our surplus is produced long distances in the interior, substantial advances in transportation costs have the effect of imposing a differential against our own producers in favor of their competitors in foreign lands, especially to the south of us, who have the benefit of cheap water transportation, and who, in many cases, can lay down their products on our eastern coast more cheaply than our own people can ship their products to the same points by rail.

Rail transportation is essential to our agricultural production. Good rail service is of tremendous importance. Our farmers realize that our railroads can not be maintained



10. *Yearbook of the Department of Agriculture, 1921.*

and operated efficiently unless permitted to charge rates which will cover all fair operating costs, maintain their roadbeds and equipment, and pay a fair rate on the money invested. No one has a greater interest than the farmer in efficient transportation. At the same time the economic aspects of material changes in railroad rates must be considered more carefully than in the past. If these changes are made without due consideration of their effect on agricultural production, inevitably they will create profound disturbance and impose great injustice.

With the increased charge for transportation have come increased handling charges all along the line from the farm to the market. Including freight, it now costs the grain and live-stock producer just about twice as much to get his products to the primary market and sell them there as it cost him before the war. At the same time the prices paid at these primary markets are lower than they were before the war, and in the case of corn, our largest grain crop, the price at Chicago is lower than the average price at this time for the past 15 years, while on the farms in the heaviest producing States the prices are lower than for 25 years.

#### Land Prices and Rents.

The four years 1916-1919, inclusive, were prosperous for farmers in general. Prices of grain, live stock, cotton, and wool were relatively high, and thrifty farmers got money ahead. These higher prices caused a large advance in the price of farm land. Not all of this was due to farmer buying. The shrewd trader and speculator scented some easy profits and bought to sell again. Also promoters of easy business virtue deliberately set snares for unwary purchasers and induced them to go overheavily in debt for land bought at prices which included unfair profits. Many young farmers who had saved several thousand dollars during the prosperous years were induced to buy farms on contract at the price peak, making small payments down, with provision for yearly payments of interest and on the principal on pain of forfeiture of all sums previously paid. The sadly unprofitable year of 1920 wiped out thousands of these fine young men, and the even worse year of 1921 will finish more of them.

During the prosperous years land rents went up rapidly, doubling and trebling, and in some cases going even higher. It was human nature that renters should prefer to pay cash rent in a time of good farming profits. The drop in prices for crops in 1920 caused many of these renters to lose not only their labor for that year but their savings as well. But for the leniency of their landlords thousands upon thousands of other renters would have lost everything they had.

### **Difficulties of Producers a Matter of National Concern.**

The cynical or thoughtless man is disposed to say: "What have I to do with all of this? Those unfortunate purchasers and renters exercised bad business judgment. They took their chance and lost. They are simply victims of business misfortune. The same sort of thing will happen to me if I show no better judgment. Of course, I am sorry to see them lose, but really it is no affair of mine."

Nevertheless it is a matter of concern to the Nation at large and it is the affair of every good citizen when any considerable number of hard-working men get into financial difficulties so serious that their ability to produce is impaired. And surely it is a matter of concern to the community at large when the food producers of the Nation so generally find themselves in a condition not only financially unprofitable but which threatens continued production.

The unprofitable year of 1920 compelled large numbers of farmers to borrow heavily to meet excessive costs of production, which could not be paid for out of crop proceeds. Interest rates were high, and through our ill-adapted system of credit for farmers' needs, particularly in such times, most of these loans had to be renewed every 90 days. The unprecedented drop in prices of farm products in 1920 came as a stunning surprise to the majority of farmers. They had expected some decline, but nothing so severe as what actually happened. Consequently for a time they tried to avoid heavy sacrifice and continued their borrowings. Their bankers shared their belief that the situation would adjust itself and were willing to lend, but prices went lower, and these loans, together with loans previously made, soon added volume to that mass of frozen credit, of which we have heard so much talk during the past year.

### Continued Production Depends on Fair Prices.

So we find that, speaking generally, the economic conditions which affect agriculture are in a bad state, with ruinously low prices for grains, with farmers laboring under heavy financial burdens, and with their difficulties having been communicated to practically every other line of industry, commerce, and general business.

In setting forth this situation so candidly, my thought is not to add to the discouragement but rather frankly to bring

THE SLUMP IN PRICES OF TEN LEADING FARM CROPS  
WEIGHTED AVERAGE, JAN. 1920 TO FEB. 1922  
AVERAGE 1913 PRICE EQUALS 100

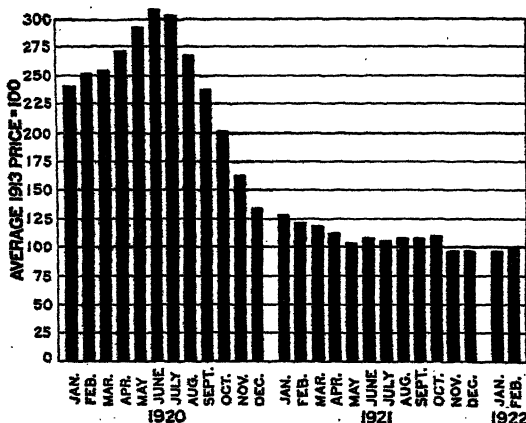


FIG. 6.—During the latter half of 1920 the average price in the United States of the 10 leading crops dropped 57 per cent, and by May, 1921, was only one-third that of the preceding June. In November, 1921, this average price passed below the 1913 level. The magnitude of this decline in price varied with the different crops and in different regions. In Iowa, for instance, the farm price of corn in the autumn of 1921 was only half that in 1913 and one-fourth that in 1919.

any length of time on a basis which does not give the producer a fair price. If conditions continue under which workmen in other callings, whether laboring men, skilled workmen, manufacturers, or business men generally, receive pay which is so very much higher than the farmer receives, there will be a steady drift from the farm to industries and business, thus increasing the number of consumers and decreasing the number of producers, and this will result in prices for farm products so high that conditions will be re-

the situation with all its difficulties clearly into view. The condition must be recognized exactly as it is if it is to be alleviated. Ignorant optimism is just as harmful as doleful pessimism. We must accept the cold fact that agricultural production in adequate measure can not be continued

versed and the burden will be transferred to the people in the cities. It is not to the advantage of the Nation that any large group of our people be placed at an economic disadvantage.

Fortunately, there is a brighter side to the picture I have presented. Prices for live stock are much higher relatively than prices for grains. In the case of corn, for example, which is our largest grain crop, the farmer is receiving very much more for this grain when fed to hogs and cattle and sheep and marketed in that form than he is receiving for his corn when marketed as corn. Speaking generally, about 80 per cent of our corn crop is fed to live stock, and those farmers who have maintained their live-stock production are not suffering so severely as might be indicated by the price of grains. The prices of dairy products also are higher relatively than the prices of grains and feeds, and in those sections where dairying is practiced there is a steady income and the farmers are getting along.

The cotton crop of 1920 was large, and when the foreign outlet was so restricted prices dropped far below the cost of production. The situation was so serious throughout the cotton States that the bankers, merchants, and business men generally joined with the farmers to bring about a reduction in the acreage in 1921. This effort was successful, and the acreage was reduced about 28 per cent. The crop was still further shortened by the ravages of the boll weevil, so that the final figures will indicate a reduction of nearly 50 per cent below last year's production. When this situation became known there was a rapid advance in the price of cotton. The price doubled within a period of a few weeks. The effect was beneficial not only to the cotton planters and others who held old cotton, but to all business interests in the South, and reports from that section have been much more hopeful during the past two months.

#### Constructive Legislation by Congress.

The marked decline in the prices of farm crops during the fall of 1920 was noted with some satisfaction by the consuming public. Although prices of farm products on an average had not increased as much as the prices of most other commodities and had not increased as much as wages in industry, nevertheless our people had been accustomed

to cheap food for so long that any increase in price, whether actual or relative, met with indignant protest. The drop in prices paid to the farmer, however, was not followed by a corresponding drop in the prices which the consumer paid for his foodstuffs, and before the summer was well advanced the thinking business public began to see that the severe drop in the prices the farmer received was having a very bad effect upon business and industry in general and that such a marked reduction in the purchasing power of the farmer might result disastrously. When Congress met in April, 1921, the danger to our agriculture was in the minds of Senators and Representatives, especially those from the agricultural States, who had first-hand knowledge of the situation, and there was an earnest casting about for measures of relief. Many bills were introduced in the hope of helping the farmer. Members of the staff of the Department of Agriculture were called into council on these measures.

Much time was given to the preparation and submission of statistical matter and other information asked for by legislators. It became evident that there were no short cuts by which an immediate return to agricultural prosperity could be insured, but some laws were enacted which already have had a helpful influence. Most of these were directed toward making credit more easily available for worthy borrowers. The joint-stock land banks were helped back into business by the measure which authorized them to increase the interest rate on their bonds issued based on farm loans. The power of the War Finance Corporation was greatly extended, making large sums available for agricultural needs. The machinery for getting out these loans is now working well and most helpfully in the surplus-producing States. Provision was made for increasing the capital of the Federal farm land banks, thus enabling them to extend their farm-mortgage loans, and the better demand for bonds based on these loans is making rapid extension possible. An act was passed bringing the packers and market agencies under Government supervision, and another act extending Government supervision over grain exchanges. Never in the same length of time did Congress give more serious attention to farm needs.

All of this legislation is of a constructive character and will be more helpful than is now realized. Concerning the efforts to make easier credit conditions, there is this to be remembered: Better prices for the crops the farmers have to sell and lower prices for the things they have to buy are far more needed than an opportunity to go further in debt. Easier credit will be helpful mainly in enabling the farmer to tide over this period of severe stress without being compelled to sacrifice his live stock and crops and without losing his farm. Money made available through the new facilities provided by legislation should be used mainly for carrying loans on which payment is demanded and for buying live stock to consume the surplus crops. If loan companies and insurance companies which hold farm mortgages will freely grant extensions of payment of both principal and interest, that will help conditions very much, and they can do this without danger of loss.

As is always the case in such periods of depression, many well-meaning men come forward with ill-considered measures. Visionary schemes of all kinds are presented. Some would have the Government take charge of the larger business enterprises; others would have the Government undertake to fix prices either arbitrarily or indirectly by buying up surplus crops. The experience of 3,000 years shows the impracticability of such efforts.

Much is to be hoped for from the agricultural inquiry which has been under way since midsummer by a joint committee of the Senate and House. The department has aided this committee in every way possible, and especially by preparing a great mass of statistics bearing on the economics of agriculture. The result of the committee's studies should be very helpful in enabling us to plan wisely in the future.

#### **Must Consider Economics of Agriculture.**

In addition to contributing what it could of helpfulness to Congress and to other agencies seeking means of relieving the uncomfortable situation, the department has been working earnestly in its own field. Agents have been sent to Europe to study conditions there in the hope of finding ways to enlarge our exports of farm products. We have not met with large success in this direction because of eco-

economic conditions abroad. Continued inflation overseas and drastic deflation at home put us at a decided disadvantage in selling our products. However, much exceedingly helpful information has been gained, which, while not promising the full measure of immediate relief we would like, will help us to plan more wisely and to adjust our production more perfectly to the foreign demand. The effect upon our agriculture of economic and financial policies put in force by nations which import foodstuffs has not had the attention in this country which the matter merits.

Had we in the past given as much attention to the economics of agriculture as we have to stimulating production, it is not too much to say that at least some of the troubles which now beset us might have been anticipated and avoided. Firmly convinced of this, one of my first acts upon taking office was to inquire into the economic work being carried on in the department. I found this mostly in two bureaus and one office of bureau standing. Last winter Congress provided in the agricultural appropriation act for the consolidation of the Bureau of Crop Estimates and the Bureau of Markets. In considering this consolidation I found that to secure the greatest efficiency in our study of economic problems it would be wise to include in this merger the Office of Farm Management and Farm Economics as well. To make sure that nothing might be done without due thought, I appointed an economic council, consisting of five bureau heads, and asked them to consider the economic work of the department and make their recommendations. After much study and investigation this economic council prepared a report. Several highly qualified men from different parts of the country were then asked to come to Washington and go over the plans submitted. They did this and approved the plans, which contemplate the consolidation of the Bureau of Crop Estimates, the Bureau of Markets, and the Office of Farm Management and Farm Economics and the rearranging of the work of these three bureaus under appropriate divisions. Not having authority to formally complete such consolidation, I consulted with various members of the agricultural committees of the Senate and House, and upon receiving their approval ordered that the work be so arranged as to virtually effect the consolidation. In the esti-

mates for the next fiscal year I have asked legal authorization to complete it.

### **New Bureau to Meet Needs.**

I have suggested that the name of this new bureau should be the Bureau of Agricultural Economics. It is proposed to merge into this one bureau all the forces of the department which are engaged in agricultural economic work. The purpose is to inquire into every economic condition and force which has an influence upon either production or price, for the one depends upon the other. We shall begin with the study of farm management, types of farming, cost factors, market grades, and practices as they bear on farm management. The cost of production and distribution will be studied at each stage along the way. Investigations will be made in land economics with a view to encouraging a wholesome system of land tenure, land resources and utilization, land settlement and colonization; the marketing of farm products with a view to better organizing distribution, market conditions, standardization, and grading of products; collection of statistics of production and distribution; crop and live-stock production both in the United States and in foreign lands; prices of farm manufactured products; historical and geographical studies in production and distribution with a view to interpreting the trend of agricultural prices and production, the development or decline of markets, and generally the geography of the world's agriculture; methods of finance; insurance of buildings, live stock, and stocks in storage; taxation and its relation to production and distribution; the financing of rural public utilities and other group enterprises; agricultural conditions in countries which compete with the United States; the characteristics and changes in rural home life and its relation to agriculture; the trend of agriculture and population; in short, everything which may be helpful to the farmer in producing with judgment. Such studies and investigations will be just as helpful to the consumers as to the producers, for the ultimate purpose is to make sure that our people are abundantly supplied with the products of the soil at prices which will both sustain our agriculture and be just to the consumer.



Much of the work outlined above already has been under way in the department, some of it for many years, but I am sure that this bringing together in one bureau of the major economic projects of the department will both reduce expense and make possible the better working out of these projects.

The organic law which created the department back in the sixties contemplated exactly this sort of development. By it the department was charged with the duty of acquiring and diffusing "information on subjects connected with agriculture in the most general and comprehensive sense of that word." The thought that the sole duty of the farmer is to produce and, having produced, take his crops to the nearest market, sell them for what he can get, and then go home and produce some more, is no longer entertained by well-informed men. It is now generally recognized that the farmer has a very direct and personal interest in the efficiency with which his crops are handled until they reach the consumer's table. The production of food has long been considered as a sacred obligation, but it is an obligation not in any sense more binding than the obligation to get that food to the consumer with the least possible waste and at the least possible cost. Nor is the obligation to produce more binding than the obligation to produce intelligently with due regard to the needs of consumption. It is just as important that the producer know what to produce and how best to get it to the consumer as it is to know how to produce at all.

### **Marketing Is Part of Production.**

Marketing is as truly a part of production as is the growing of the crops, for the crops have no value unless they can be put into the hands of those who need them. The assembling, storing, and distributing of farm products are productive enterprises and those engaged in this work require much the same economic and technical information as that required by farmers. The acquiring and disseminating of knowledge of what to produce and how best to market it is as much needed as the knowledge of how to produce, whether the matter is viewed from the standpoint of the farmer, the middleman, or the consumer, for orderly and stabilized pro-

duction means prices which are neither very much too high nor very much too low and guarantee an abundance of food at all times. Such knowledge can not be gained from a study of the mechanics of marketing alone. It is much more than a business matter. It involves research in agromomic, biological, and physical, as well as statistical and economic science by men trained in their respective lines and who have a working knowledge of agricultural processes and conditions.

### **Agricultural Research Involved in Marketing.**

To learn what it is wise to produce involves study of the varieties, qualities, and quantities demanded by the market. In the case of fruit, as an illustration, this requires the selection or the breeding of suitable varieties by the horticulturist; a study of life processes by the plant physiologist; the study of liability to attack by bacteria and fungi by the plant pathologist. Thus it may involve cooperation of horticulturists in breeding suitable varieties with physiologists in the study of their behavior and with plant pathologists in the study of their liability to disease. All these are factors in the bringing to market of a large variety of agricultural products.

Practically all agricultural products are more or less perishable and good marketing involves more than mere salesmanship, more than a mere determination of the public taste, the public demand, and the probable supply. Only through the carrying out of investigations in marketing of the type above described, in which horticulturists, plant physiologists, plant pathologists, chemists, refrigeration experts, and statisticians have cooperated, has it been possible to give to American agriculture that distinctive character which makes it possible to produce perishable products on one edge of the continent and to market them without serious deterioration upon the other.

A very good illustration of the way in which the various forces of the Department of Agriculture are mobilized and used to successfully create a great new industry is found in the story of the Washington navel orange. Back in 1870 the department first brought this variety to the United States from Brazil. The introduction consisted of 12 newly

budded trees. These were planted in the department greenhouse in Washington. One of the original trees is still growing there. The first two young plants propagated from these were sent to Mrs. L. C. Tibbets, Riverside, Calif., in 1873. When these trees came into bearing the high value

## DEVELOPMENT OF NAVAL ORANGE INDUSTRY

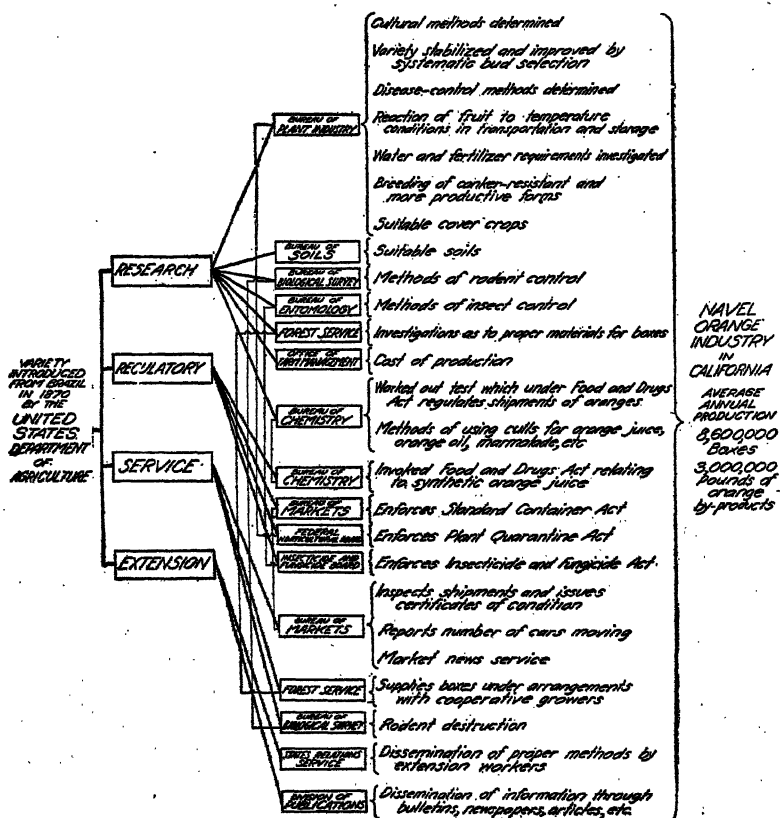


FIG. 7.—A great industry largely due to team work in the Department of Agriculture.

of the variety was promptly recognized, and then began its development for market. The accompanying chart shows in graphic form how the services of the scientists of the different bureaus of the department were utilized to establish this new industry, from which there is now an average annual production of 8,600,000 boxes of oranges and 3,000,000

pounds of orange by-products. This is but one of many stories which could be told of the service the department is rendering to the Nation.

### Studies in Grain Marketing.

In the marketing of grain, investigations are necessary on the milling and baking qualities of wheat and other grains for the purpose of determining the relation or intrinsic values of such factors as test weight per bushel, gluten content, color, texture, general appearance, different forms of damage and mixtures of various impurities, and treatment to which grain is subjected in handling.

All this is necessary in order not merely that grain may be properly graded but also that the most suitable kinds of grain may be bred, introduced, and grown. This work has the profoundest effect on farm operations.

The cereal breeders in the department, particularly those engaged in the breeding of wheat, work with those engaged in the studies of grain markets and standards. In order that a new variety may be readily acceptable to the farmer and to the grain trade it must be determined before it is distributed that it meets the demand of the market. Otherwise it would be no advantage but an actual detriment to introduce a new variety of wheat which yields more than the variety a farmer is now growing but which has a poorer milling quality, so that he would receive a lower price for it on the market. Therefore, the plant breeder and the market specialist must work together to see that only those varieties are distributed which are at least as good as the varieties now generally grown.

All along the line there needs to be the closest cooperation between department scientists who are familiar with varietal adaptation and the rapid changes taking place in the varieties grown by farmers and those who have to do with marketing and particularly those concerned in formulating and administering grain standards. The rapid increase in the growth of red durum wheat made it necessary to introduce new standards for that class of wheat.

Diseases play an important part in determining the market grade and value of cereals. The presence of smut in any considerable quantity is always noted in grading wheat

and the price materially reduced because of it. The shriveling of wheat caused by rust and the presence of moldy and rotten ears and spoiled kernels in corn, due to corn rots and other diseases, materially affect the grade and market value of those grains. Therefore the work of research specialists, either in developing methods of controlling the disease or in producing resistant varieties, is of importance not only to farmers but to the grain trade and to consumers. It is necessary that the biological research workers be closely in touch with those who are studying grain marketing and grain standards, so that the latter may be advised of outbreaks of new diseases or the occurrence of extensive epidemics of diseases already well known.

Crop rotation and farm management affect the presence of mixtures of other grains and of weed seeds and are therefore important factors in determining the grade of grain sold by farmers. Practically every phase of research has its bearing upon marketing and benefits both producer and consumer.

#### Land Utilization Study.

Considering the future, the need of basic research in agricultural economics becomes even more manifest. We produce more foodstuffs than our own population can consume, and under present conditions we are suffering because of the lessened foreign demand which leaves it on our hands. This, of course, will not continue. The world will weather this period of reconstruction and trade back and forth will be restored. Our own population is increasing rapidly, and within a very few years home needs will require most of what we grow. We can not increase our land area. We now have under the plow practically all the land that is easily available for cultural purposes. We can add to our productive areas by reclaiming wet land, by clearing cut-over land, and by irrigating dry land. These additions must be made at considerable expense and can be made wisely only after thorough study of the character of the land, its location as to markets, and its adaptability to produce what the market needs.

I have assigned to a committee of highly competent men from the several bureaus of the department the task of mak-

# USE OF THE LAND PRESENT AND POTENTIAL

The pie chart is divided into two main sections. The left section, representing the present land use, is a large dotted area labeled 'ABSOLUTE FOREST, GRAZING AND DESERT LAND 1,100 MILLION ACRES'. The right section, representing potential land use, is a smaller area with various patterns and labels. It includes 'IMPROVED LAND 503 MILLION ACRES' at the top, 'LAND IN HARVESTED CROPS, 1919 365 MILLION ACRES' in the center, and 'IMPROVED LAND NOT IN CROPS 138 MILLION ACRES' at the bottom. The bottom section is further divided into 'POTENTIAL IMPROVED LAND 800 MILLION ACRES' and 'POTENTIAL IMPROVED PASTURE 150 MILLION ACRES'. Other labels include 'IRRIGABLE 30 MILLION ACRES', 'DRAINABLE 90 MILLION ACRES', 'FOREST & WOODLANDS 100 MILLION ACRES', 'LEAVING ALSO 100 MILLION ACRES', 'NOT NEEDED DRAINAGE 100 MILLION ACRES', and 'POTENTIAL IMPROVED PASTURE 150 MILLION ACRES'.

ABSOLUTE FOREST, GRAZING AND DESERT LAND 1,100 MILLION ACRES

IMPROVED LAND 503 MILLION ACRES

LAND IN HARVESTED CROPS, 1919 365 MILLION ACRES

IMPROVED LAND NOT IN CROPS 138 MILLION ACRES

IRRIGABLE 30 MILLION ACRES

DRAINABLE 90 MILLION ACRES

FOREST & WOODLANDS 100 MILLION ACRES

LEAVING ALSO 100 MILLION ACRES

POTENTIAL IMPROVED LAND 800 MILLION ACRES

POTENTIAL IMPROVED PASTURE 150 MILLION ACRES

LAND AREA OF UNITED STATES 1,903,000,000 ACRES

FIG. 8.—Improved land in farms amounted to 503 million acres, according to the census of 1920, of which about 365 million acres were in crops, and probably 70 million acres in rotation and other improved pasture. There are about 300 million acres more which it is possible to use for crops when the price of farm products justifies the cost of irrigation, drainage, clearing, or other means of reclamation. This cost is increasing as the more feasible projects are developed, and demands careful study with reference to the probable price of agricultural products and the Nation's needs.

the wet lands, and the cut-over timberlands, especially with a view to determining how such lands can best be used to increase agricultural production as needed. We must have

reliable information concerning these lands if we are to develop a wise agricultural policy.

The largest increase in production, however, must come not from the addition of new land but from increased yields on the land now under the plow. This means a tightening up of production methods. Increased production ordinarily increases cost and our efforts should be, therefore, to cheapen production as well as marketing costs. We will be driven to this by increasing competition from foreign farmers in countries where fertile land is still very cheap and where the standards of rural life are not as high as we demand for our own people. Until very recent years this foreign competition was not a serious matter. Our own land was relatively cheap, and our farmers are the best in the world, measured by the standard of production per man. Now, however, with land at prevailing prices our farming in the future must be conducted on much more business-like lines and in such a way as to return a fair income one year with another. Deferred income resulting from large and rapid increase in farm land values is very nearly a thing of the past.

Without lessening in any way our efforts to produce more cheaply and better, we must give the most painstaking attention to studies of what we may call the business side of farming, such as have been mentioned in discussing the proposed Bureau of Agricultural Economics. Our steadfast purpose should be to maintain the agricultural basis of this Nation, to maintain and advance our relatively high standards of rural life, and to conserve the fertility of our soil through a well-balanced system of agriculture. Under a carefully thought out agricultural policy embracing these essentials there need be no question of our ability to feed our people abundantly and at reasonable cost.

### Organization of the Department.

Turning now to the general work of the department, it is organized by bureaus, scientific and administrative. A hasty glance at this organization might give the impression that these various bureaus are to some extent unrelated in their organization and work. Quite the contrary is true. The activities of each bureau are not limited to the apparent boundaries of that bureau but are extended to aid other

bureaus. Some reference already has been made to this in what has been said on the subject of marketing. The solution of the varied problems affecting agriculture requires the combined efforts of men in many scientific fields.

The functions of the department are carried on in four general fields of endeavor—research, extension, regulation or supervision, and service. These fields, while distinct in themselves, nevertheless imperceptibly merge into one another and the workers pass back and forth as needed, just as the farmers of a community change work with one another or come together to perform a task too large for the individual.

### Research the Basic Work of the Department.

Naturally, the basic work of the department is in the field of research. Upon the results of this work its other activities are built. For the first 40 years its chief business was in this field. A staff of scientific specialists was built up who made studies of the soil, of plant cultural methods, of the breeding and feeding of animals, of plant and animal diseases—of everything which had to do with crop and live stock production. It is this scientific research which contributes the material that little by little is crystallized into agricultural progress. Through this work of the department, in cooperation with the various State experiment stations, the Nation is richer by thousands of new varieties of plants introduced from other lands or created by scientific breeding. Plants have been discovered which are better adapted to our colder climates, our arid regions, our higher

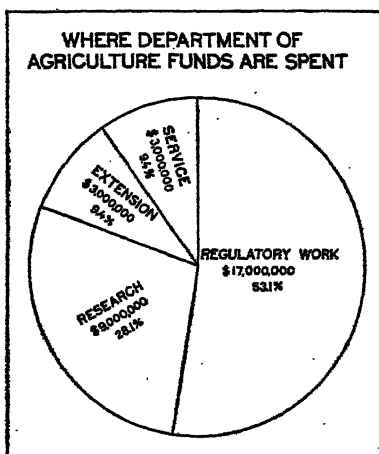


FIG. 9.—The functions of the department are carried on in four general fields of endeavor—research, extension, regulation or supervision, and service. It should be pointed out that over half the funds for service and regulatory work were expended in the performance of the primary functions of government rather than for the direct development of agriculture.



altitudes; disease-resistant strains and drought-resistant varieties have been developed; methods of control of diseases of plants and animals have been discovered; the science of bacteriology and animal pathology has been created; and a protecting and ever-vigilant army has been organized around the sources of our food supply.

To try to tell the story of the year's work in research would be a hopeless effort in a report of this kind. It will be found in detail in the numerous scientific publications and bulletins printed by the department and in the reports



FIG. 10.—The Colombian berry, a promising new fruit, introduced in 1921, which comes from an elevation of 10,000 feet in the Andes Mountains of Colombia. It is probably the largest berry yet discovered. The fruit resembles the loganberry, but is much larger, single specimens sometimes measuring  $2\frac{1}{2}$  inches in length by  $1\frac{1}{2}$  inches in thickness.

of the bureau chiefs. At the present time research work is being carried on in some 2,500 different lines of investigation, in some by one bureau alone, in others by the cooperation of several bureaus.

Among the more important of these investigations a very few may be mentioned:

Development of a new process for manufacturing phosphoric acid to eliminate the immense waste now suffered in mining phosphate and thus reduce the cost of fertilizers.

Development of a method for separating the microscopic colloidal particles in soils, which is expected to throw light

on such agricultural problems as cultivation of soils, the amount of water required by certain soils, their capacity for retaining plant foods, and their reaction to lime.

Development of better methods for fixing atmospheric nitrogen for use as fertilizer.

The soil survey has completed the mapping of soils over an area of 1,063,588 square miles, including 31,915 square miles in Alaska and 300 square miles in Porto Rico. The work covers approximately 950 counties and 50 reconnaissance areas.

Investigation of corn root, stalk, and ear rots to determine the causes and methods of preventing these obscure and widespread diseases.

Investigations of the effect of light, and more especially the length of the day, on plant development, furnishing explanations of phenomena in plant growth not heretofore understood and essential to accurate experimentation in the breeding of plants for economic purposes.

Development of methods of accurately measuring the productiveness and other important characteristics of perennial plants, such as fruit trees, through bud selection, which will make possible the replacement of undesirable trees with desirable types of the same variety.



FIG. 11.—The seasonal length of day exercises a marked regulatory action on flowering and fruiting of plants. The Evening Primrose here shown remains in the rosette stage and is unable to flower under the relatively short days of late fall, winter, and early spring, but quickly responds to the long days of summer.

Experiments looking to improvement of the milking quality of beef cattle.

Practical completion of experiments which have resulted in the establishment of a breed of general-purpose fowls which lay white-shelled eggs.

Breeding experiments which will lead to the fixing of a type of American utility horse.

Studies to ascertain the cost of producing various farm crops and the cost of marketing them.

Studies to throw light on the whole marketing problem as a basis for the more efficient organization of the various marketing processes, whether the work is done by individuals or by groups of farmers.

Research to determine the composition of agricultural products in order to develop new uses for cull and surplus crops.

Basic research on the composition of foods and drugs in order to establish standards to prevent adulteration and to improve methods of manufacture.

Research to develop methods of chemical analysis for the use of chemists in agricultural colleges, experiment stations, universities, and those connected with Federal, State, and municipal food and drug departments.

The development of measures for the control of the European corn borer, the Japanese beetle, the pink bollworm of cotton, and other crop pests that have recently gained foothold in this country.

Researches to determine the characteristics of materials designed for highway construction.

Researches to determine improved methods of highway design to meet modern traffic conditions.

Studies of hydraulic problems, including the factors influencing run-off and flow of water in drainage canals.

### **Money Spent in Research Is National Investment.**

It is impossible to estimate the value of this research work. The money spent for it is capital invested by the Nation in building a permanent agriculture. Its dividends come from increase in yields, decrease in cost of production and marketing, and better utilization of crops, all having for

their purpose the maintenance and increase of our food supply.

Last spring Congress very wisely authorized the appointment of a Director of Scientific Work. This will make it possible still further to coordinate the work of the various bureaus and also to bring the scientific work of the department into closer relation with the scientific work being carried on in the experiment stations of the different States, as well as to cooperate with various other agencies engaged in similar or related lines of investigation. Such cooperation should result in a well-rounded national program of research, a larger and better directed program than we have had in the past, and a much better utilization of both time and money.

In the carrying out of this policy there is need for the strengthening of the work of the State experiment stations by increased Federal appropriations. These stations are receiving about \$3 of State appropriation to \$1 contributed by the Federal Government, but even with this help they have not been anywhere near able to keep pace with the calls for information and investigation resulting from the rapid development of the extension service. As the researches of these stations and the Federal department are the sources from which the information to be carried by the extension service is derived, it is of the utmost importance that the research service be strengthened so as to adequately meet the demands for information. The Federal Government can well afford to be liberal in appropriating money to the State experiment stations to be used in research work planned in cooperation with the department.

As an aid to the research and other work the department maintains a library, which was increased during the year by the addition of 7,500 book and pamphlets. The collection now contains 160,000 books and pamphlets, a large number of which can not be found in any other library in the country.

### **Agricultural Education.**

The importance of extending and improving agricultural instruction in schools is fully recognized by the department, and the Congress has for a number of years made provision

for investigations on this subject. The purpose is to make available to teachers and students the agricultural knowledge accumulated here and by the agricultural colleges and experiment stations. The department cooperates with the Federal Board for Vocational Education, as provided for in the Smith-Hughes Act, with the States in preparing courses of study in elementary agriculture for rural schools, and with teacher-training divisions and teachers in service.

In cooperation with the Federal Board there has been prepared a number of courses of study on agricultural subjects, especially for the use of teachers in vocational agricultural schools operating under the Smith-Hughes Act.

Through State cooperation two courses of study in elementary agriculture, based on a study of the agricultural practice in the respective States, were prepared during the past year, one for the rural schools of Arkansas and the other for the rural schools of North Carolina. Some special assistance was given the Department of Education in Ohio in the form of suggestive outlines for rural teachers.

Circulars suggesting how teachers may profitably use information contained in certain publications, particularly the Farmers' Bulletins of the Department of Agriculture, are prepared from time to time with the hope of improving methods of instruction in agriculture and related subjects. Five such circulars were prepared during the past year, dealing with such subjects as beautifying the homestead, better seed corn, cowpeas, forage for the cotton belt, and factors that make for successful farming in the South.

The schools are also aided by the loan of illustrative material, especially sets of lantern slides adapted to school use, and by the distribution of classified lists of publications of the Department of Agriculture, as well as lists of sources of materials valuable to teachers of agriculture.

In all this work it is recognized that the teaching of agriculture in a community should have a vital connection with the problems of the farms of that community. Pupils are interested in those things with which they come in contact, and it is believed that the type of agriculture practiced in the community can be used to the best advantage in teaching. Therefore the teacher is urged to organize the available subject matter which is of community interest and present it in

such a manner that it will touch closely the life and experiences of the pupils.

### Home Economics.

While other branches of the Government study certain phases of food, clothing, and household equipment, the Department of Agriculture is the only one specifically concerned with investigations relating to the selection, preparation, and care of these commodities in the home. These are matters of importance to agriculture in two ways—first, because the final utilization of agricultural products is an essential part of the economics of agriculture, and, second, because the welfare of a farm family depends upon how wisely it uses the materials, money, and labor available for household needs.

The Department of Agriculture during the past year, as in previous years, continued to carry on investigations on food, clothing, and household equipment and management, with particular reference to assisting extension workers in improving conditions in the farm home. The constantly increasing number of requests received for reliable information on all such subjects proves the desire of American housekeepers to apply the results of scientific research to their household practices, just as farmers have come to demand a scientific basis for agricultural methods.

The department has found it impossible to meet all the legitimate demands for such information made upon it by extension workers, other branches of the Government, public and private institutions, teachers, and individuals, and has therefore found it necessary to confine its efforts to a limited number of the more pressing problems which it is especially well equipped to study, which seem most generally urgent, or regarding which there is the least available information.

### Department Administers Many Laws.

The regulatory or supervision work consists of the administration of a large number of laws, such, for example, as the food and drugs act, which forbids the adulteration or misbranding of any article of food or drugs entering interstate commerce; the meat inspection act, which insures the wholesomeness of our meat; the protection of the national forests;

a number of quarantine acts dealing with live stock and with plants; the protection and commerce in game animals and migratory birds; the manufacture of serums and toxins; the insecticide act; the tea importation act; the enforcement of grain and cotton standards; the Federal warehouse law; the act prescribing standards of size of boxes and baskets used in the packing and selling of fruits, berries, and vegetables; the Federal road act; the packers and stockyards act; the future trading act. Through the administration of these and a number of other laws designed to protect our people from impure food and unfair weights and measures the department comes into very direct contact with the business and consuming public throughout the country. These laws are administered with a view to aiding legitimate industry and, at the same time, protecting the public from unfair practices on the part of those few whose business ethics are not as high as the public interest demands.

The administration of each law has been placed in the bureau that has to deal with the scientific and constructive work concerning the subjects affected by the law. Experience has shown that a law affecting commodities manufactured from a given agricultural raw material can be most constructively enforced by the organization that is familiar with the production and handling of that raw material. If the law is of such nature as to affect a range of commodities or subjects so wide as to go beyond the purview of a single bureau, it is administered by a board made up of specialists from the different bureaus having to do with the scientific investigation of the subjects involved. An example of the former kind is the meat-inspection law, which is a matter primarily for veterinarians. Examples of the latter are the plant quarantine act, which equally concerns plant physiologists, entomologists, and foresters; and the insecticide and fungicide act, which is of equal concern to plantsmen, animal husbandmen, and entomologists. But even those acts that come wholly within the purview of a single bureau require for their proper enforcement the cooperation of scientists in other fields of agricultural research. The enforcement of the food and drugs act, for instance, constantly calls for the cooperation of chemists, of botanists, of biological scientists in the fields of animal industry, and of various other specialists

who are employed by the department primarily to perform other duties but without whose aid the enforcement of the food and drugs act would become so wooden and autocratic as to become obnoxious alike to producer and consumer.

### Regulatory Work Stimulates Research.

It has been found that the regulatory work strengthens the research work because in the regulatory work problems are discovered that are of the utmost importance to the welfare of the country and which can be turned over to the scientific research staff for solution. Thus, the regulatory work is a source of stimulus for the research staff. Some of the most valuable practical work that has been done by bureaus having laws to enforce has grown out of information gained in the regulatory work. If the bureaus had not had the regulatory work to deal with, the problems would not have come to the attention of the scientific staff.

There is still another class of regulatory work consisting of the administration of laws that are permissive rather than mandatory in nature. An example is the United States warehouse act. The duties growing out of such administration are perhaps more accurately described as service than as regulatory work, but they none the less act in the same stimulating manner upon the scientific work.

The department reported during the year to the Department of Justice 6,514 civil and criminal cases arising under the various regulatory statutes committed to its administration and enforcement. Notices of judgment were filed in 2,275 cases involving the adulteration and misbranding of foods, drugs, insecticides, and fungicides.

### Packers and Stockyards Act.

During the past summer Congress added to the duties of the department by placing under it the enforcement of the packers and stockyards act and the future trading act. These laws give the supervising agency large powers.

In the case of the act first named the packers are prohibited from any unfair, unjustly discriminatory, or deceptive practices or devices; from giving undue preference; from apportioning the supply of any article with the effect of restricting commerce or creating a monopoly; from ma-



nipulating or controlling prices; from apportioning territory or purchases or sales. Commission merchants, persons furnishing stockyard services, and dealers at yards are required to establish, observe, and enforce just, reasonable, and nondiscriminatory rates. They are forbidden to charge other rates than those named in schedules which they are required to file for approval with the supervising agency, and the latter after hearing may determine and prescribe just and reasonable rates and make appropriate orders and enforce same. The act carries suitable penalties. The packers, stockyards, and market agencies may appeal to the courts if their rights are infringed.

Under the terms of this act it should be possible both to correct any unfair practices in the marketing of live stock and to make a constructive study of the business of marketing live stock and distributing meats.

The organization for the administration of this act is now being built up as an independent unit in the department. Great care is being taken to select men who have general knowledge of the live-stock industry and of marketing and packing, and who are level-headed, even-tempered men, free from prejudice.

### Grain Exchange Supervision.

The future trading act imposes a prohibitive tax of 20 cents per bushel on future-trading exchange transactions known to the trade as "privileges," "bids," "offers," "puts and calls," "indemnities," or "ups and downs." It also provides for a tax of 20 cents per bushel upon grain sold for future delivery, except when the seller is the owner or the grower of the grain, or the owner or renter of land on which it was grown, or an association of such owners or growers, or owners or renters of land, or when such contracts are made by or through a member of a board of trade which has been designated by the Secretary of Agriculture as a contract market. It provides that all such contracts must be evidenced by a memorandum in writing containing essential information. The Secretary of Agriculture is authorized to designate boards of trade as contract markets under certain conditions set forth in detail in the law, which conditions provide for adequate Government super-

vision of such markets. The Secretary of Agriculture is authorized to make such investigations as he may deem necessary concerning operations of boards of trade and may make rules and regulations calling for the information necessary to make such investigations.

Under this act it should be possible to make a thorough study of the operation and effect of future trading in grains, and it is hoped that after a time this information may make it possible to do away with unfair manipulation in prices of grains, if such is found to exist.

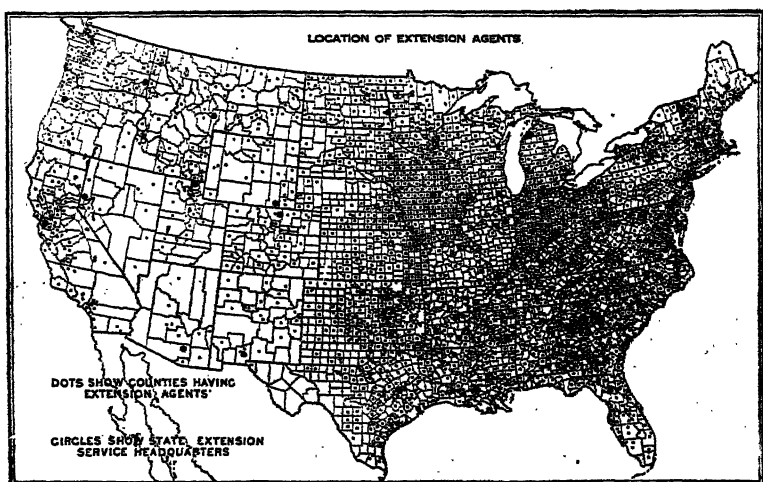


FIG. 12.—One of the means by which the extension work of the department is carried on is through the county extension agents in agriculture and home economics. In 1921 about 2,425 persons were engaged in county extension agent work in approximately 2,000 of the 2,650 counties having enough agriculture to employ an agent. The total number of counties in the United States is about 3,000.

### Confidence Shown in Extension Work.

The extension work of the department is designed to carry to the farms the results of its research activities. This is done through cooperative arrangement with the agricultural colleges and experiment stations through the agricultural agents who are now working in more than 2,000 counties, as well as by means of the very large number of bulletins in which the application of the work in research is presented in popular form and thus made available to the individual farmer. During the year the two offices of ex-

tension work, one for the South and the other for the North and West, have been consolidated. It is expected that under this arrangement some money may be saved and that even more efficient work will be done than in the past.

Confidence in the extension work is strikingly shown by the steady increase of local funds for the support of the extension agents. During the past year about \$16,800,000 was available from Federal, State, and county sources, and of this amount \$5,900,000 was contributed by the county governments and farm organizations. This year the total funds will be about \$18,500,000, of which \$6,900,000 comes from sources within the county.

### Special Work Among Negro Farmers.

The special work among the negro farmers of the Southern States has been fully maintained. Not only have the white agents taken an increased interest in aiding the negroes, but the number of negro agents has been somewhat increased. There are now 157 negro men and 91 negro women employed in the county extension work, together with two unusually capable negro men employed by the States Relations Service as general field agents. In the States the responsibility for the administration of the negro work rests on the State agricultural colleges which conduct the work among the white farmers, but the State colleges for negroes cooperate as far as practicable in this branch of the extension service. The work among the negroes has had very useful results in improving both agriculture and race relations, but is at present reaching only a small fraction of the negro farm population. It should be extended more rapidly.

### Work Among Farm Women Broadened.

The work among the farm women has been considerably broadened of late and is based more definitely on careful studies of the actual requirements of farm homes and the varying character of the problems which need immediate attention in different regions. It now includes many things relating to the farm home food supply, diet of children and adults, clothing, household equipment and management, care of children and the health of the farm family, as well as the encouragement of agricultural production by women and

girls, where this is needed to increase their income or to supply their families with a more varied and healthful diet. In the recent public discussion concerning pellagra and other diseases due to malnutrition, the fact was largely lost sight of that in many thousand southern homes the families had better health because under the guidance of the home demonstration agents the women and girls had good gardens, raised poultry, and kept dairy cows, either doing all the work themselves or enlisting the assistance of the men and boys. There has also been increasing cooperation of the extension agents with the Federal, State, and local health services, the Red Cross, and private associations dealing with the affairs of rural communities.



FIG. 13.—Pig clubs show the way to better stock. Left to right, the breeds are: Poland China, Duroc Jersey, Berkshire, Chester White, Hampshire, and Tamworth.

The boys' and girls' club work continues to have well-merited popularity and is a great inspiration to many thousands of our farm children. In many cases their achievements in the production of excellent crops and animals serve as examples which the adult farmers are very glad to follow. This work is leading an increased number of farm boys and girls to see the advantages of technical education in agriculture and home economics, so that former club members are now found in considerable numbers in our schools and colleges where these subjects are taught.

#### Agencies Employed in Extension.

Some of the agencies through which the extension work is carried on are:

Two thousand four hundred and twenty-five persons engaged in county-agent work in approximately 2,000 of the 2,650 counties having enough agriculture to employ an agent. The total number of the counties in the United States is about 3,000.

Nine hundred and fifty persons engaged in home demonstration work in 725 counties.

Three hundred and five persons engaged in boys' and girls' club work.

Special extension workers in farm management and farm economics.

Special dairy extension workers.

One thousand two hundred and sixty Farmers' Bulletins and 1,037 technical and scientific bulletins covering practically all phases of the department's work have been issued up to date.

Press service to approximately 17,000 publications, including newspapers, agricultural journals, trade and professional journals, church papers, magazines, etc.

Exhibits at agricultural expositions and fairs.

Motion pictures, which are furnished free for exhibition at various kinds of agricultural gatherings.

The Assistant Secretary of Agriculture was chosen with especial reference to his experience in extension work, in addition to his general qualifications for the position. He has been assigned to general supervision over this work and already has under way plans for the coordination of the various extension activities, including the publication and information work. I feel sure that under his guidance this work will be greatly strengthened during the coming year.

There is a growing feeling in the department and in the State extension divisions that more attention should be given to a unified extension program for the entire farm family and less to separate divisions of work along the lines of sex and age. This consideration will be kept in mind in the contemplated reorganization plans. It also seems wise to give more attention to a national program of agricultural progress. We hope to give the States more material aid along this line.

### Service Work Carried On.

In what might be called the field of service is included such work as the crop-reporting service, the market-news service, the weather service, and many others. These activities are neither research nor extension, strictly speaking, although their field is greatly extended by research, and knowledge of the work is spread through the extension serv-

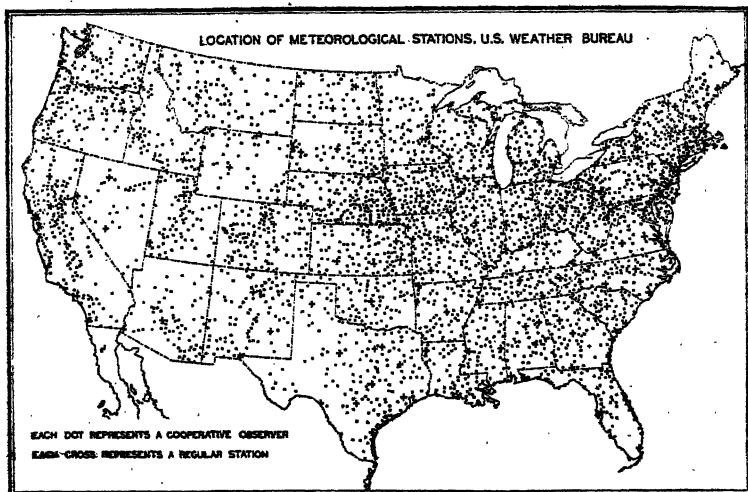


FIG. 14.—One of the services the department renders the American people is the daily weather forecast. These forecasts are based on reports received by telegraph from the 200 regular stations of the Weather Bureau, shown on the map by crosses, and as soon as the forecasts are made they are supplied not only to the regular stations, which in turn supply the city newspapers and meet other requests, but also are telegraphed to about 1,200 other places throughout the country. Public-spirited individuals to the number of 400, without other compensation than the satisfaction of serving, print and mail cards bearing the forecast to all who have requested them in their vicinity and agree to give them public display. About 58,000 cards are now being distributed daily. The forecasts are also distributed by telephone and are available to more than 6,000,000 subscribers, and are now being distributed by radio. The 5,000 cooperative observers, shown by dots on the map, also serve without compensation in collecting climatic information.

ice. Other services, such as are connected with the forest administration, for example, grow out of research and have certain phases of a regulatory nature, but are very largely protective to the interests involved.

Some of the important lines of service work are:

Weather forecasts, covering not only general conditions, but having particular application to various specialized industries, agricultural and otherwise.

Crop reports, designed to afford equal opportunity to producers and buyers to judge of production and, therefore, of demand.

Market-news service, covering both staple and specialized crops.

Meat-inspection service, certifying the wholesomeness of all meat and meat products entering interstate or foreign trade.

Inspection service, available alike to producer and distributor, by which the condition of fruits and vegetables and other food products is definitely fixed at the time of shipment or of arrival at destination.

Inspection service for the War Finance Corporation.

Inspection of certain food supplies for the Army and the Navy.

An office of development through which the discoveries of the research workers are made available to the industrial world.

Aid in improving the quality of their output to manufacturers using agricultural products as raw materials.

The following periodical publications are issued in connection with these services:

*Daily*.—Weather map; market reports as follows: On butter, cheese, eggs, and dressed poultry; on perishable fruits and vegetables; on meat-trade conditions and wholesale prices; on live-stock markets; and a general market-news service.

*Weekly*.—National Weather and Crop and Snow and Ice Bulletin; Market and Crop Reporter; market reviews as follows: On butter, on cheese, on meat-trade conditions, on live-stock markets, on peanuts, a carlot summary by States.

*Semimonthly*.—Report on honey and beeswax.

*Monthly*.—Weather Review; export report; report on fluid-milk market, condensed-milk market, and powdered-milk market; summary of cold-storage holdings of frozen and cured meats and of frozen and mild-cured fish.

*Quarterly*.—Production report of certain dairy products and oleomargarine.

## Stamping Out Plant and Animal Diseases.

The warfare carried on against plant and animal diseases calls for the combined efforts of the research scientist, the extension specialist, and those who have to do with certain regulatory measures. When a new and dangerous plant pest gains lodgment within the country its presence first is detected by the scientist. He makes a study of its life history, if such is not already known, of its natural enemies, if it has such, of its host plants; in short, seeks all possible information that may be of use in fighting it. This knowledge is taken to the farmers in the community in which the pest has appeared and its danger thus made known. A campaign of eradication is then organized, or, if not eradication, then a campaign to check the spread of the pest. In the case of many plant and animal diseases eradication has been found practicable. This is carried on in cooperation with the States, but can be successful only under the authority of the Federal Government which may be exercised in different States.

The possibility of entirely eliminating a pest or disease from our country is an entirely different problem from that of carrying on investigations to limit its injury. For example, the ravages of the codling moth increase the cost of producing apples in an amount averaging about 10 per cent for the whole country. The untreated orchards suffer a direct loss in fruit of from 40 to 80 per cent, or even a total loss, depending on the severity of the infestation. Proper spraying and caring for orchards may reduce the direct loss to a minimum, but the cost of doing this then becomes the burden, and this cost on the average is not far from 10 per cent of the cost of production of the apple. If by the expenditure of any reasonable sum of money this pest could be entirely eliminated from a region or from the United States, it would be worth an enormous sum of money, as it would obviate the expense of fighting it, as well as increase the production of sound fruit.

The cotton-boll weevil destroys \$200,000,000 worth of cotton annually. Any program that offered a reasonable possibility of success in eradicating this pest would warrant the expenditure of many millions of dollars.



### Eradication Depends Upon Research.

It is only through the most effective kind of scientific research and thorough organization that any such ambitious eradication programs as above suggested could be carried out. On the other hand, when a new insect pest or plant disease suddenly appears in a small area in the country the expenditure of a relatively large amount of money in a concentrated effort toward its eradication may entirely eliminate what would otherwise be a constant menace to the industry threatened. The foot-and-mouth disease has invaded this country several times, and each time by prompt and vigorous action and the expenditure of a few million dollars the entire live-stock industry, aggregating many billions in value, has been protected from this scourge. Should it once get away from us, eradication would be impossible. In the same way the prompt and efficient attack on the citrus canker in the Gulf coast region resulted in the elimination of a disease that threatened the entire industry. The total cost of this effort to date has been less than \$3,000,000, while the actual destruction caused by the pest during its brief period of injury was many times that amount, and if unchecked it would have entirely eliminated one of the most valuable industries of that region. These are examples of the possibility of success of prompt and effective service. There is always a possibility of failure, and such failures have occurred, notably in the case of the chestnut blight and the white-pine blister rust. These were due to the fact that the diseases were far more widespread before they were discovered than was realized at the time the effort was made. The expenditure of the money was, however, abundantly justified in the possibility that it offered of success. If the chestnut blight had been discovered in time we would still have our chestnut trees. As it is, they have been practically destroyed.

Two other eradication programs are just now in critical stages. The pink bollworm is one of the most serious cotton pests that the world has known. A considerable part of America's success in cotton production has undoubtedly been due in the past to the fact that we did not have this insect to contend with, while nearly all of the competing countries were infested. It has obtained a considerable foothold in

Texas and Louisiana. The next year or so will determine whether the campaign of the department to eliminate it is to be a success or not. If successful, the cotton industry will be in a favorable situation. If the pest escapes into the large cotton-growing regions, it will then be but a question of holding it to the smallest possible areas, with the practical certainty that ultimately it will reach the entire cotton-growing region.

In anticipation of the possibility of such misfortune trained men have been sent to cotton-growing regions in other countries to study cultural methods which may be followed to reduce the damage done by this pest. Similar work has been successful in the fight against the boll weevil. As a result of the research applied to cotton during the period of the boll-weevil invasion it has been possible to develop superior varieties and improved methods of cultivation that greatly reduce the injuries or make good the losses that the boll weevil inflicts. Most rapid progress in growing the improved varieties is made in communities which devote themselves, under a plan of community organization, to the production of a single variety.

The gipsy moth has been present in Massachusetts for many years. Owing to the favorable direction of the prevailing winds the department has been enabled to hold this pest from spreading to the south and west. During this period a number of new infestations—mainly from European shipments—have been discovered in different parts of the United States. These have been promptly attacked and in every case have been eradicated. A little more than a year ago a serious infestation was found in New Jersey which had evidently been there for a number of years and had increased to an alarming extent. This outbreak is a serious menace to the entire forest, shade, and fruit tree industry throughout the eastern area. The same winds which have been so favorable in helping to hold the New England area in check will undoubtedly sweep this infestation northward and eastward if unchecked until it will devastate the entire New England region. Special appropriations have been granted for the purpose of eradicating this infestation, and a two hundred thousand dollar increase is being requested in the regular appropriation for the next fiscal year

to continue this work. It is hoped that by aggressive action this outbreak may be confined to its original area and rapidly reduced until it is completely eradicated.

### Steady Progress Against Animal Scourges.

There are other types of eradication work, such as the fight against the cattle tick, in which the work goes on year after year, making steady progress. The tick-fever line has been pushed gradually southward until it appears that within a very few years the entire United States will be freed from Texas fever, which has greatly retarded the progress of

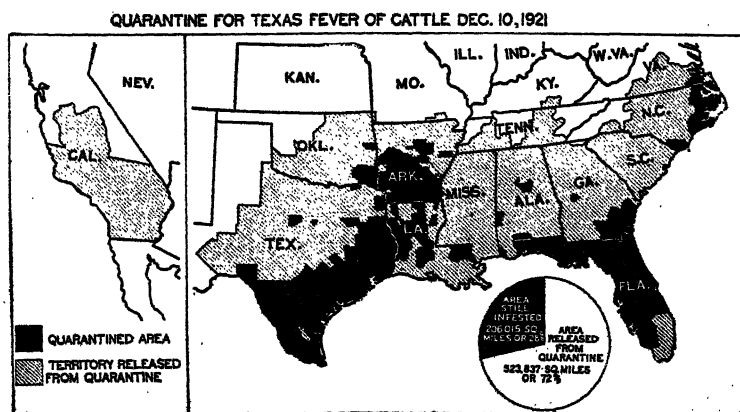


FIG. 15.—The cattle tick, which transmits Texas fever in cattle, and formerly infested all of the Cotton Belt and the southern portion of California, has now been practically eradicated from most of this region. The infested areas at present include a belt of counties near the coast in Virginia, North Carolina, and Georgia, most of Florida, and a broad belt extending from central Arkansas southwestward to southern Texas. Nearly three-fourths of the area originally infested has been released from quarantine.

live-stock production in the South. It is worthy of note here that this program was made possible through discovery by the scientists of the department of the transmission of the fever by the cattle tick, a most valuable contribution to our knowledge of the transmission of many other diseases of animals and of human beings.

The practical means of eradicating tuberculosis in animals also originated in the discovery of a scientific test by which the presence of the disease is revealed. The use of this test makes possible the elimination of this dread disease. To begin with, it was used by a limited number of breeders of

pure-bred stock who desired to free their own herds from disease. Then a plan for cooperation by the Federal Government, the States, and the owners of cattle was worked out by which all the cattle of a community might be tested and the diseased ones eliminated. Were it possible to prosecute this work more vigorously there seems good reason to believe that the live stock of the country could be freed from tuberculosis. Unfortunately, sufficient Government and State funds are not available to prosecute this campaign as rapidly as live-stock owners wish. The Federal Government appropriated \$1,000,000 to be used for partial indemnity during the year beginning July 1, 1921. This was to be paid only when States contributed an equivalent amount. Before four months of this fiscal year had elapsed the allocation of Federal funds had been exhausted in a number of States, and here the warfare against tuberculosis must practically stop unless further appropriations are made. With one exception, it is believed that every State to which Federal money has been allotted for this purpose will have used all of those funds before the end of the fiscal year. It is unfortunate that adequate sums are not available now. Cattle are cheap, the public interest is aroused, and the work of eradicating tuberculosis would go forward most satisfactorily were the funds at hand.

The common barberry, the bush which carries the black stem rust of wheat from one year's crop to another, is being eradicated from 11 of the upper Mississippi Valley States, the great wheat belt of the United States. This is another campaign that is now under way and has already reached the stage in which it is consolidating areas from which the pest has been eliminated. Unexpected difficulties have arisen from time to time in this as in other eradication campaigns. Considerable areas of wild barberries have been discovered in a number of places that were undoubtedly responsible for much of the injury of the years past. Sporadic outbreaks of rust appeared in the wheat fields in this area last season, but no general epidemic, such as appeared in 1916, has occurred since the beginning of the barberry removal campaign.

The eradication of predacious animals, which have been so destructive to the live-stock interests of the western re-

gions, as well as the eradication of prairie dogs, ground squirrels, and other rodents, which have annually been destroying the grass and grain crops on vast areas, are other programs which are in a formative stage. Already some of these campaigns have reached the point of extermination over large areas, and as time progresses and the people come to recognize the value of this work undoubtedly the areas will be extended and a general extermination of some of these pests undertaken.

### Further Research Necessary to Eradication.

The hog-cholera control program has not yet reached the eradication stage. More scientific work must be done before it will be possible to put the handling of this disease on the same footing with tuberculosis eradication. It is one of the most serious menaces of the live-stock industry and it is to be hoped that a method of absolute control may be speedily found.

There is no more fertile field in the range of scientific endeavor than that offered by the possibility of eradication of destructive insects and plant diseases. Pests and diseases not only cause great losses but make much more difficult the effort to adjust production to the needs of consumption. A considerable number of live-stock pests and a number of the worst pests of our cultivated crops are so limited in their food habits or in some stage of their life history that it will be possible to apply eradication methods whenever conditions appear favorable. Most eradication campaigns require a preliminary period of education in the possibilities and opportunities of accomplishment before those interested are willing to cooperate to the extent necessary to make them successful. Most of the failures of eradication campaigns for introduced pests have been due to the lack of understanding of the serious nature of the situation until it was too late for effective work. The cotton-boll weevil could have been eradicated any time during the first five years of its invasion of the United States for a relatively small sum if the cotton growers had only realized the danger that was impending and had been willing to conform to the control measures recommended by the department's scientific staff. On the other hand, the eradication of a

pest of long standing which the people have come to consider a necessary evil may be very difficult, owing to lack of faith in the possibility of the program and a consequent lack of cooperative endeavor.

### Record Made in Road Construction.

During the past year more improved roads were built under the Federal-aid road act than during any similar period, the mileage completed being more than three times as great as the entire mileage completed during the preceding years under the act. At the end of the fiscal year 1920 a total of 1,677 miles of Federal-aid road had been completed, and there were 14,940 miles additional under con-

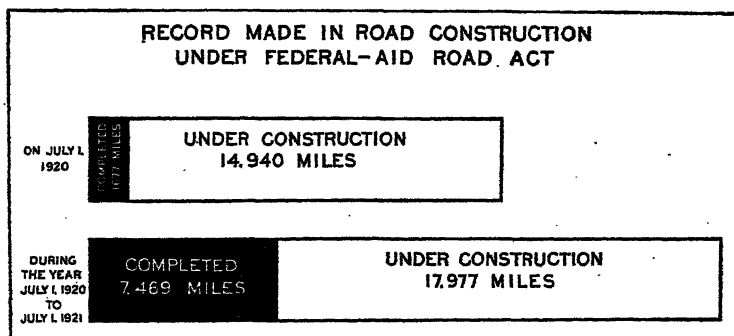


FIG. 16.—During the past year more improved roads were built under the Federal-aid road act than during any similar period, the mileage completed being more than three times as great as the entire mileage completed during the preceding years under the act.

struction and reported as about one-third complete. During the fiscal year 1921, 7,469 miles were completed, and at the end of the year there were 17,977 miles under construction.

Including the completed work on the projects still under construction, the States were entitled to draw Federal funds to the amount of \$118,915,515. In addition there was a balance allotted for projects under construction but not yet earned to the amount of \$66,375,636. The total amount of Federal money in projects completed or under construction at the end of the year was, therefore, \$185,291,151, or about 70 per cent of all the money made available to the States from past appropriations.

Of the \$266,750,000 which was available to the States the unobligated balance was but \$18,793,544. Twelve States had no balance remaining due them. Nine States still had to their credit more than a million dollars unobligated. The remaining States had varying amounts of less than a million dollars still unallotted to definite projects. Under the law these allotments must be taken up by the States before June 30, 1923; otherwise the amount remaining will revert to the Federal Treasury for redistribution among the States.

### **Economic Conditions Encourage Road Building.**

There has been marked improvement during the past year in the economic conditions affecting road work. Rail transportation for needed material has been more satisfactory. Contractors have been glad to undertake new work at lower prices than before, and the increasing unemployment of labor in industries has made a larger supply of labor available for road work at much lower wages. Encouraged by these improved conditions, many States have been offering contracts for large sections of road improvement.

The task of keeping roads in repair is becoming increasingly difficult. Traffic steadily grows and carries heavier loads, and because of this old methods of annual repair will not suffice in the future. Nothing short of constant and systematic attention, involving the immediate repair of defects as quickly as they appear, will maintain our highways in good condition. In the past the Federal Government has not been able to control maintenance, although, as a rule, the States have acted in good faith, and at the close of the year all completed roads were in satisfactory condition. Most of these roads, however, were new and will require far more attention in the future.

### **New Road Law.**

The new Federal highway act passed by Congress in the fall of 1921 is believed to be the most constructive road legislation ever enacted in this country. It carries an appropriation of \$75,000,000 for the fiscal year ending June 30, 1922, of which \$25,000,000 is immediately available, and provides that unexpended sums allotted to any State shall

be available to such State until June 30, 1924, after which any unexpended balances shall be reapportioned to the various States. In the average State this money is expended in the proportion of \$43 from the Federal Government to each \$57 provided by the State. Each State must have a properly organized and equipped State highway department. Projects for road improvement must be submitted by the State and be approved by this department before Federal money is available. The State is required to designate a system of highways not to exceed 7 per cent of the total highway mileage of such State. This selected system shall be divided into two classes, one to be known as primary or interstate highways, which shall not exceed three-sevenths of such system, and the other to be known as secondary or inter-county highways, which shall consist of the remainder of such system. Not more than 60 per cent of Federal-aid money shall be expended on the primary or interstate highways except with the approval of the State highway department, and the States are required to make provision of State funds for construction, reconstruction, and maintenance of all Federal-aid highways, which funds shall be under the direct control of the State highway department.

Only such durable types of surfacing as will adequately meet existing and probable future traffic needs and conditions may be included as part of the 7 per cent system, and all such construction must have the approval of the Secretary of Agriculture. In States having large areas of Government land provision is made for larger relative Federal aid.

#### Road Maintenance Insured by New Law.

The matter of maintenance seems to be safeguarded by this new law in a thoroughly satisfactory way. It is provided that if the State fails to maintain any highway which has been improved through Federal aid, the Secretary of Agriculture shall bring this delinquency to the attention of the State. If within 90 days such highway has not been placed in a proper state of repair, the Secretary shall proceed to have it placed in such condition and charge the cost thereof against the State's apportionment of Federal-aid funds. He shall also refuse to approve any additional proj-



ects in the State until the State has reimbursed the Federal Government for amount of Federal-aid money spent for such maintenance work. The Secretary is authorized to have such maintenance work done as may be necessary. Responsibility for maintenance, therefore, can not be avoided.

An appropriation of \$5,000,000 for the fiscal year 1922 and \$10,000,000 for the fiscal year 1923 is made for building roads in the national forests.

The Secretary of War is authorized and directed to transfer to the Secretary of Agriculture upon his request war materials, equipment, and supplies now or hereafter declared surplus from stock suitable for use in highway improvement, and this material may be distributed to the States on the same basis as Federal aid funds are distributed, as much as 10 per cent being reserved for Federal use in road construction.

### Research Problems in Road Construction.

The Secretary of Agriculture is authorized to set aside and retain 2½ per cent of the total appropriation, to be used in administering the act and in conducting highway research. The importance of such research is increasingly evident. The demands of our highway traffic are becoming more severe. The increasing use of large motor trucks presents maintenance difficulties unknown a few years ago. The Department of Agriculture is conducting many scientific investigations with a view to improved road construction, and especially to determine the effect of vehicular impact on road surfaces. Short stretches of roads of different types are being built and submitted to the most severe traffic tests. The department also is cooperating with the various State highway departments and scientific institutions in similar investigations. It is not too much to say that the research work already done has yielded more precise scientific knowledge of highway construction and maintenance than we have ever before possessed. When we consider the enormous sums which are now being expended annually for road construction, the relatively small provision made for research work should bring exceedingly large returns.

The foregoing is a very brief outline of the more important provisions of the new Federal aid act. Under the wise administration of this act first-class road construction should proceed as rapidly as is wise and safe.

### Surplus War Material for Road Work.

Under previous acts of Congress large quantities of surplus war materials have been distributed among the States. But for the use of this material the work of the State highway departments under the difficult conditions of the past two years would have been almost impossible. This equipment was bought by the Government for use in war and the distribution of the surplus for road work, now that its need for war purposes no longer exists, is making available for the use of the taxpayer simply a return for the money he has provided. Up to the end of the fiscal year approximately \$130,000,000 worth of this material had been transferred, including \$11,000,000 worth which has been retained by the Department of Agriculture for use in connection with its various road-building activities. Approximately 27,000 motor vehicles were included in the material that has been distributed. As was to be expected, much of this surplus material was in bad condition and some of it not fit for further use. The cost of distributing the material is borne by the States. Organization for intelligent distribution and use of these materials is being improved steadily.

### The National Forests.

Until recent years the forests of the United States were looked upon as the gift of a beneficent Creator, ready prepared for the harvest, for the profit of those individual citizens to whom they were most freely parceled out by a liberal Government. While Federal funds were appropriated for forest investigations in 1876, the first forest reserves were not created until 1891, and not until 1905 were the national forests formally designated as such and placed under the administration of the Department of Agriculture. Only since the date last named has there been a definite national forest policy. It was high time. Of the more than 800,000,000 acres of original forest area there now remain

but 137,000,000 acres in virgin forest, and more than half of the remaining timber supply is in the West Coast States, which means that the lumber must pay a heavy transportation charge before it reaches the large consuming regions.

The cutting of these virgin forests was done wastefully and with little thought of growing a second crop of timber. It was a question of immediate profit, not future need. This has resulted in a staggering loss in timber production and has imperiled our future supply of wood. More than this, in mountain areas the evil extends to soil erosion steadily increasing in volume and destructiveness, and irregularities

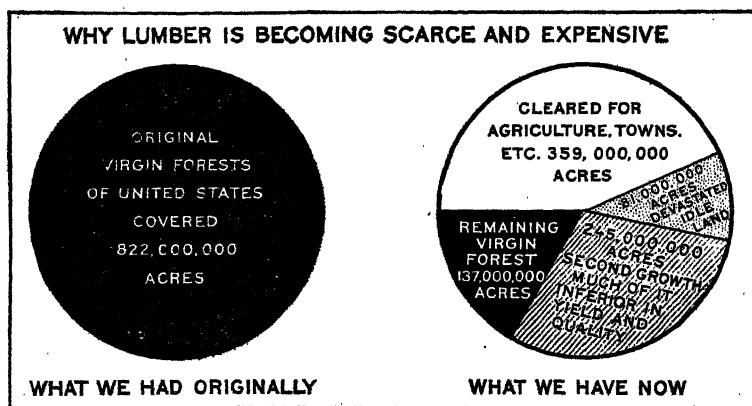


FIG. 17.—Over four-fifths of the originally forested land has been cut-over. About half of this cut-over land has been cleared for agriculture, cities, roads, etc., and the other half is growing up to trees, mostly of poorer quality than the virgin forest, or has been so frequently devastated by fire that trees can not get a start.

in stream flow ranging from excessive floods to excessive periods of low water. The denudation of mountain lands under private misuse had much to do with our difficulties in maintaining the navigability of streams and preserving regular sources of water supply urgently needed for irrigation. Recognition of this danger brought about the establishment of our national forests, which now aggregate 156,000,000 acres, equal to one-fifth of our timber-growing land.

### National Forest Policy.

The forest policy which has been developed by the Department of Agriculture since the forests were placed under it contemplates:

First. The administration of the national forests in such a way as to promote the greatest possible utilization for all purposes and at the same time the greatest possible growth of timber. This includes protection from fire, regulation of cutting, tree planting, and forest management to secure the maximum growth of timber; full utilization of forage resources for live-stock raising; classification of lands and the elimination of areas most suitable for farming; the use of lands for a wide range of purposes, including industrial developments and recreation; the fullest possible development of water powers; the readjustment of boundaries to include forest lands and to exclude other lands. While the national forests are being administered as national property, the well-being of local communities, which are largely agricultural in character, is a primary consideration.

Second. The extension of the national forests through the purchase of lands which will protect the watersheds of navigable streams. The national forests established by Executive order or by legislation now cover the headwaters of nearly all the important streams beyond the Mississippi and protect enormous investments in irrigation works, irrigable farms, and hydro-electric development. They are now slowly being extended by purchases over the watersheds of navigable streams in the eastern States and should be extended still further as rapidly as possible. This policy represents to-day the most striking application of public foresight to land problems in the history of the United States.

Third. Scientific research with a view to—

(a) Ascertaining and demonstrating through the activities of forest experiment stations the cheapest and most effective methods of growing the maximum timber crops of the best species.

(b) Products investigations, centered mainly at the Forest Products Laboratory at Madison, Wis., to ascertain and demonstrate means of preventing waste and the most effective means for the manufacture and utilization of our forest resources. These investigations are designed to extend the life of our present resources, reduce to a minimum the production necessary to meet future requirements, and indirectly to make the growing of timber more profitable.

(c) Investigations of timber resources, the extent of forest lands, and other economic questions, such as timber taxation, in order to secure the data which must underlie the development and application of a national-forest policy.

Fourth. Dissemination of information, and cooperation with States, timberland owners, and farmers, in the protection and management of public and privately owned forests and farm woodlots. These activities include—

(a) Fire protection through cooperation between the Federal Government, the State governments, and private owners.

(b) Cooperation with the management of privately owned timberlands to check their devastation and assure the continued use for timber growing of lands not better suited for other purposes.

(c) The dissemination of information which will make possible greater and better production on the 200,000,000 acres of farm woodlots owned by the individual farmers of the Nation. Woodlot products now rank in value as one of the first three or four principal farms crops of the country. The yield of these farm woodlots can be immensely increased by better methods.

(d) Publicly owned forests with the greatest additions which can be anticipated can not alone meet our requirements for wood. The department is therefore attempting by all means at its disposal to secure the adoption of a national policy for the production of timber on the privately owned lands most suitable for this purpose.

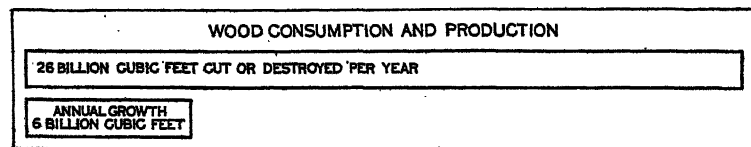


FIG. 18.—The people of the United States are now consuming annually, or permitting to be destroyed by fire, or otherwise, more than four times as much wood as is being grown. To meet the Nation's demand, wood should be grown as other crops are grown.

### Conserving the Forests.

During the 16 years the Department of Agriculture has administered the national forests it has secured and trained an administrative force remarkable for its efficiency. Meth-

ods of cutting timber have been developed under which the forest reproduces naturally, and these requirements have been so harmonized with the practical limitations of lumbering that the demand for national-forest timber has grown steadily. The condition of the national-forest ranges has been very greatly improved and at the same time the stock which they can support without damage has been increased by approximately one-third. A system of fire protection has been established which has stimulated fire protection throughout the United States and is serving as a model to State and private agencies alike. In general, all national-forest resources have been brought into use. Western public sentiment, at first decidedly hostile, now almost universally supports the present form of administration, and western stockmen have even gone so far in many instances as to demand the extension of the national-forest system of range management to the remaining public grazing lands; in short, the national forests are now vindicated by their fruits.

Some 2,000,000 acres of forest lands have been purchased at the headwaters of navigable streams in the East, and these areas have been placed under an administration comparable with those of the western forests. Favorable progress in purchases was made during the past year.

Forest products investigations, which at their initiation were ignored by the forest industries of the country, have through the demonstration of their benefits permeated the forest industries almost without exception and have given an entirely new conception of the possibilities in the conservation, manufacture, and utilization of forest products. A beginning has been made in the establishment of forest experiment stations which should as rapidly as possible be extended to cover at least all the principal forest regions of the country. Notable contributions have been made to our knowledge of remaining timber supplies and related economic subjects.

Information on the need for timber growing and the best methods for growing and utilizing timber has been widely disseminated. Public opinion has been aroused until now there is a powerful nation-wide support for the adoption of a national policy which will bring about the growing of

timber on privately owned lands to supplement that which can be produced on national forests and other public holdings.

### Protection From Fire.

Through the example of the national forests the Forest Service has extended the work of fire protection over the forested areas of one-half of the States of the Union. In its earlier work the efforts of the Forest Service at control-



FIG. 19.—A Forest Service fire lookout, on top of a mountain in the West, from which an observer stands guard over a million acres of national forest land from daylight to dark all through the dangerous season.

ling forest fires often met with ridicule as being hopeless or impossible. Last year 24 States cooperated with the Federal Government in forest-fire protection. This year the fund for cooperation with the States was raised from \$125,000 to a new total of \$400,000. The larger appropriation has greatly stimulated local effort along the same lines. The protection of forests against fire is a problem in which there are three parties in interest—the owner, who hopes to sell the timber; the local public, whose carelessness is the cause of part of the hazard; and the Nation, through its interest in navigation and welfare. Efficient fire protection will con-

tribute largely toward the solution of the problem of our future timber supply. Through its efforts in building up a system of fire protection in cooperation with the States the department is making excellent progress. There should be no break in the continuity of this work.

### **Better Utilization of Forest Products.**

The basic function of the Forest Service is to bring about the utilization primarily for timber growing, and incidentally for a wide range of other purposes, of the one-fourth of the land area of the United States best adapted to this purpose in the same way that other units in the Department of Agriculture attempt to bring about the most complete utilization for agricultural production of the part of the remaining three-fourths which is most suitable for this purpose. The Forest Service is a part of the Department of Agriculture primarily because of this basic use of land. It is related to the department, further, in the utilization of some 156,000,000 acres of national forests for the grazing of live stock, a strictly agricultural function which involves cooperation with both the Bureaus of Animal Industry and Plant Industry. It is related in the extension of road and trail systems on the national forests in the interests of agricultural communities as well as to provide communications for fire protection and for general administration, and this involves cooperation with the Bureau of Public Roads. It is related in the development of forestry on the 200,000,000 acres of woodlots owned by farmers and cooperates in this function with the States Relations Service and its widely extended organization of county agents. In its research activities the Forest Service cooperates with practically every other bureau in various economic investigations; with the Weather Bureau, in investigations on the relation of forests to stream flow and the general relations of climate to forest growth and fire protection; with the Bureaus of Animal and Plant Industry in a wide range of investigations covering both utilization of the national forests for grazing, the work of the forest experiment stations, and finally, the protection of forests and forest products from fungous diseases.



## Forest Management an Agricultural Problem.

Investigations to reduce enormous losses through decay of pulp wood and wood pulp were conducted jointly by the

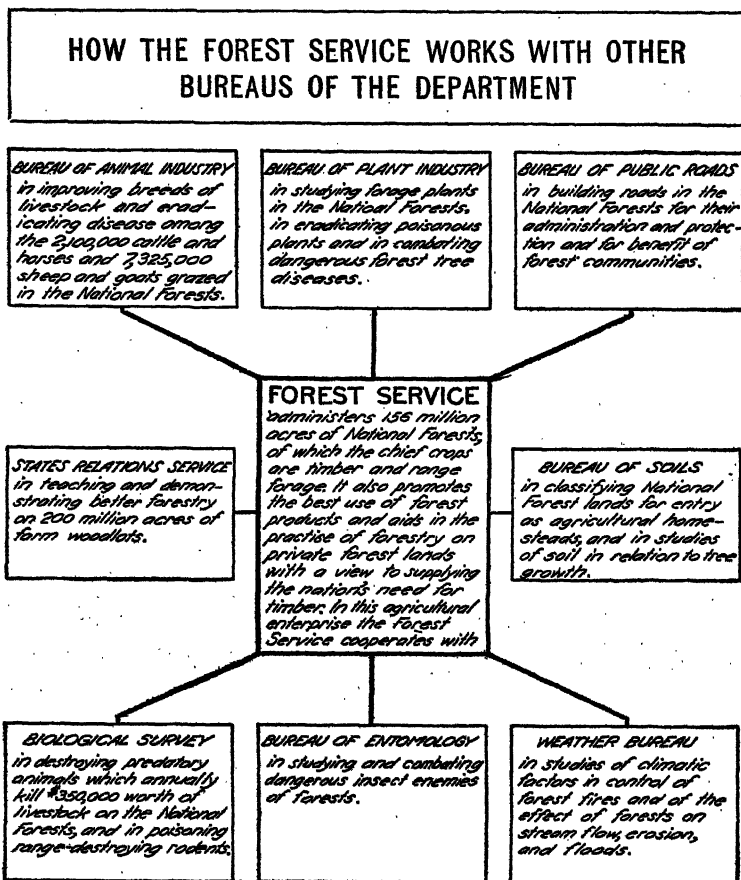


FIG. 20.—The Forest Service is an integral part of the Department of Agriculture in serving the farmers, who manage nearly 40 per cent of the forest land in the United States, the stockmen of the West, who graze over 9,000,000 head of stock in the national forests, the owners of the 200 million acres of timberland not in farms nor in the national forests, who often need technical advice and assistance, and all consumers of lumber and forest products, for whom it is providing a permanent, though limited, supply of timber from the national forests, and investigating the most economical methods of wood utilization.

Forest Service and the Bureau of Plant Industry. Cooperation with the Bureau of Entomology and with the Biological Survey covers both insect and animal attacks on forest

growth. In perfecting plans for controlling an insect infestation on forest lands under its jurisdiction the Department of the Interior has recently found it advisable to agree that the work should be handled by the Forest Service working in cooperation with the Bureau of Entomology. The Bureau of Soils assists the Forest Service in the studies of soils and their bearing on the life of forest trees and forage plants, and further, in land classification for agricultural homestead settlement. The Bureau of Crop Estimates secures information on the needs of stockmen and farmers for public and national forest ranges which aids the national forest administration, and collects also data on the products of farm woodlots which is of value in the development of farm forestry. In short, having largely exhausted the forest crop grown in advance, the problem now is to use more wisely what remains and to grow other crops to meet our needs. That is to say, forestry is a distinctly agricultural business. The function of the department as a whole includes efforts for the production and the most effective manufacture, distribution, and utilization of the products of both farm and forest for the benefit of the country at large. Finally, the agricultural industry itself is the largest owner of timberlands and the largest user of forest products, and as such is vitally interested in the administration of the forests.

### Paper Making in Alaska.

Worthy of special mention is the progress which has been made in calling the attention of capitalists and newsprint manufacturers to the splendid opportunities offered by the two great national forests in Alaska for the establishment of an important industry in that region. The Tongass National Forest, situated in the southeastern part of the Territory, has a stand of not less than 70,000,000,000 feet of timber within its area of about 15,000,000 acres. The Forest Service, after a careful study of these resources and a scientific determination of the value of such Alaskan timbers for purposes of paper manufacture, has divided the forest into 14 development regions, each one of which contains sufficient water power potentialities and sufficient timber to run a large paper-manufacturing plant permanently. It is estimated

that under the plans now worked out the two national forests in Alaska can furnish *perpetually* 2,000,000 cords of pulpwood annually, amounting to an equivalent of one-third of our present consumption. Two large sales have already been made and one small mill erected. It is confidently anticipated that extensive development along these

### ALASKA'S PULPWOOD WEALTH

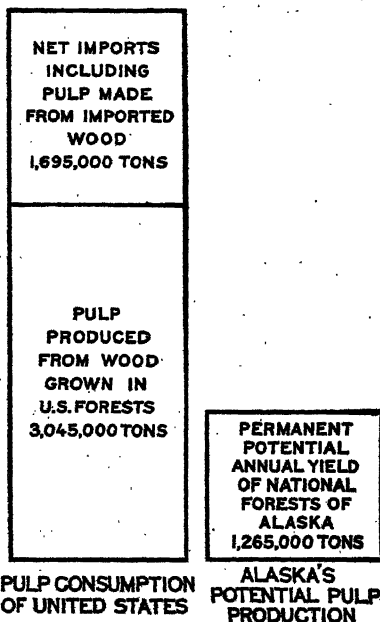


Fig. 21.—The United States can and should grow enough pulpwood for its entire paper supply, instead of importing large quantities of pulpwood, pulp, and paper at high prices. The national forests of Alaska alone, if continued under their present scientific management, will permanently supply more than one-fourth of our present yearly demand for paper pulp.

lines will take place as soon as financial and industrial conditions become normal. The problems of forest administration in Alaska are inseparably linked with similar problems encountered in the States, and an efficient, decentralized, local administration has been established which is functioning in close co-ordination with the other scientific bureaus of the department.

### The Department in Alaska.

The service rendered by the Department of Agriculture in Alaska is exactly the same sort of service that it renders in the various States and Territories, modified, of course, to meet local conditions. It maintains in Alaska nine stations of the Weather Bureau. The Biological Survey

has four stations which give attention to the reindeer and land fur-bearing animals. The Forest Service, as has been noted in dealing with its activities in this report, has charge of the large national forests there. The Bureau of Public Roads handles forest-road construction under the Federal-aid act. Extension work through the States Relations Service is car-

ried on from five different agricultural experiment stations scattered through the Territory. Through these activities the people of Alaska have the same benefit from the work done by the Department of Agriculture as have the people of the States.

Because of the distance the representatives of the department in Alaska have been given larger powers than representatives in the States. The effort has been to delegate the largest possible authority in order that prompt decisions may be made on the ground.

### **Better Housing Needed for Department.**

The offices and laboratories of the department are scattered in more than 40 buildings in various parts of the city of Washington. This results in waste of a tremendous amount of time and money for which the Government must pay. Efficiency is impaired by difficulty of personal contact between the Secretary and the officers of the department, as well as between bureau chiefs and units of their own respective bureaus. Many units which are closely related organically are so separated by the exigencies of housing space that much confusion exists and full and efficient utilization of the services of the workers is impossible. The necessary transmission of mail and packages between so many scattered locations requires a very large messenger force, while the guarding of these scattered buildings, by day and night, necessarily entails a force of watchmen much larger than would be needed for a smaller number of suitable buildings properly located. In addition it is a source of constant embarrassment to the department that visitors who have business to transact with the Government must be referred from building to building, frequently from one part of the city to another.

Of the buildings owned by the Government and occupied by the department, several are of the temporary type, erected hurriedly during the war, highly inflammable, and otherwise unsuited to the work of the department. The same is true of some of the rented buildings. In several of these buildings the valuable property and records of the Government are continually exposed to the risk of fire, and there is even apprehension of loss of life.

The prompt construction of a large modern office building for the use of the various scattered units of the department should be a profitable financial investment and would add immensely to the efficiency with which its work is carried on.

### Capable Leadership Essential in Department Work.

The most important single problem before the department at the present time is that of securing and holding the right kind of leadership in its different lines of work. The possibility of economically and efficiently carrying out a given project depends upon the vision and resourcefulness of the individual assigned the task. He must have technical training requisite to meet all the intricacies of the situation, administrative ability sufficient to organize and lead his force, and a personality that will win confidence and respect. Individuals having all these qualities are rare, but once secured are the very foundation of an efficient scientific organization. With this type of leadership in all divisions of the work the highest possible efficiency can be secured with a minimum expenditure of funds.

On the other hand, with a leadership lacking in training or vision the essential point of an investigation or the fundamental principle which gives value to another type of service may be neglected and the entire expenditure may accomplish little or nothing of permanent advantage. With adequate training and the proper personal qualities but without administrative ability the project may be prosecuted with the right objective but be ineffective and wasteful in operation.

In research work it is doubly important that the project leader possess these qualities, for much of our research is of such a nature that it is difficult or impossible for those not familiar with the problems involved to determine whether the methods employed are such as to finally secure the desired results. Great importance is therefore attached to reliance and dependability in leadership. In recommending in its estimates for the next fiscal year advancement in salaries for certain of the administrative leaders of the department, and especially in recommending the increase in the maximum possible to pay scientific workers from \$4,500 to \$6,500, the department is acting solely from the standpoint of econ-

omy and efficiency in the expenditure of these funds. A given amount of money wisely expended will accomplish very much greater results than double that amount used in the maintenance of an organization without a definite aim or purpose.

### Need for Better Salaries.

The situation as to salaries grows worse each year. Efficient leaders in the different lines of the department's work are one by one leaving the service to accept employment at higher rates of compensation or under more favorable circumstances. The salaries in the Department of Agriculture were fully comparable with those in the better grade of educational and research institutions before the war period. Since that time these institutions by the pressure of commercial interests and higher wage standards in other lines of effort have advanced their salary scale from time to time until now many of the endowed institutions, such as Columbia, Yale, Harvard, Stanford, and Chicago, are paying professorial salaries of from \$7,500 to \$10,000. Harvard, for example, pays the heads of all of its departments from \$6,000 to \$8,000. These salaries promise to be increased rather than diminished.

In the same way the State-supported institutions have raised their salary standards until such institutions as Wisconsin, Minnesota, Illinois, Ohio, and California are paying from \$6,000 up. When a single institution like Chicago or Wisconsin has 125 professors receiving an average salary quite a little above \$5,000, it is not difficult to see why the department has trouble in retaining its bureau chiefs with an average salary of \$4,700 and its project leaders with an average salary of \$3,500. The bureau chiefs should rank in training and experience and in professorial qualities with college presidents. In fact, two of them have refused such presidencies within the past year. The project leaders of the department have larger administrative responsibilities and should have higher qualifications, on the average, than the deans and directors of our educational institutions whose salaries average from \$1,000 to \$2,000 higher than those of the professors of the corresponding institutions. A number of the former employees of the department are receiving sal-

aries ranging from \$10,000 to \$20,000 in commercial positions. Loyalty and opportunity for great public service has held many a scientific worker in the department against a flattering offer from the outside, and because of that spirit it will always be possible for the department to hold its workers at a lower salary than the maximum paid by the educational institutions and for very much less than that offered in the commercial fields. If, however, any satisfactory degree of permanence is to be secured, it will be necessary to reach a salary standard whereby these men will be enabled to maintain a reasonable standard of living for themselves and their families with a small surplus to supplement the totally inadequate retirement provisions of the present time.

If the department is to go forward in its work and meet the increasingly complex problems of the future it must have authority to pay fair salaries. In research work the loss of a scientist not only imperils the leadership of the project but inevitably in leaving he takes with him a knowledge and experience gained at the expense of the Government, which is only to be acquired by his successor by long and painstaking effort; so that even if an equally strong man could be secured the loss through the lack of continuity of the work is usually much greater than the increased outlay that would have been necessary to have insured the continuous services of the individual. From every standpoint, therefore, the high turnover in scientific personnel that the department has been experiencing in recent years is uneconomical and wasteful.

The proposed program of cooperation and correlation of scientific work of the department and the State stations calls for an even higher type of leadership on the part of the department. In order to make such projects feasible and to properly equip the organization for an effective attempt to attack the more fundamental problems which have up to the present time resisted the efforts of isolated workers, such permanent leadership must be secured.

#### Highly Trained Scientists a National Asset.

The great discoveries of the ages have been made by exceptionally gifted individuals, and the nation that can produce such individuals and provide for the concentration of

their efforts on the problems of most vital interest to national welfare will be successful in the competition of the future. The experience of the war period has amply demonstrated that when the leading scientists of the Nation were called together for the solution of a given problem success was practically assured. The trend of movement of population and civilization in the past few centuries has been toward the center of food production. This tendency will undoubtedly increase. It would therefore seem but the part of wisdom to make adequate provision for leadership and efficiency in matters so vital to national welfare.

### Graduate Work in Department.

To maintain continued efficiency in a scientific organization under civil-service regulations some provision must be made for adequate training of those who enter the service in the lower positions. The rapid turnover in personnel during the war and post-war periods has resulted in an extremely rapid advancement of these men. To meet this need the department has provided for graduate training in various lines for the scientific workers. The work is given outside of office hours, is supported entirely by the students, and is therefore unofficial in nature. It is, however, supervised and encouraged by the department. The workers are allowed to take only one course at a time, and everything necessary is done to insure the highest standard for the work, so that it will not only be effective training for the department workers but satisfactory to the graduate institutions of the country. It is expected that the ambitious workers of the department will make arrangements with such graduate institutions for the acceptance of these credits and will ultimately attend these institutions and complete the work required for advanced degrees. Leaves of absence for this purpose are being arranged and closer cooperation with graduate departments in the solution of research problems is being considered.

Some of the strongest scientists of the department are taking charge of courses and a few of the leading graduate institutions have furnished teachers for others. Altogether a most helpful spirit has prevailed. It is expected that other graduate institutions will from time to time assist the department in its efforts and that the scientific men detailed



to temporary appointments in Washington may be available for this service.

Although just getting under way, this increased opportunity is already being reflected in the greater enthusiasm and loyalty of the workers within the department. The most hopeful aspect of the situation, however, is the fact that the ambitious students of the best institutions are again becoming interested in the possibilities and opportunities of Government service. The lack of adequate salary standards and opportunity for obtaining advanced training have made it difficult for the department to attract to its entrance positions in the past the very men who are absolutely essential to the continued efficiency of its work. It is hoped that provision for higher salaries in the advanced positions and enlarged opportunities for graduate work may help us overcome this difficulty.

### Conclusion.

In the foregoing I have tried to present truthfully the adverse conditions affecting our agriculture at the present time and the bad effect these conditions are having upon industry and business. The troubles by which the farmer is surrounded are not of his making. In large part they are due to world-wide conditions over which he had no control and the inevitable result of the World War. It is not to be expected that by some miraculous transformation this period of adversity may be turned overnight into a period of prosperity, but there seem to be good reasons for believing that the worst is over and that we may reasonably hope for gradual improvement from now on. A clear recognition of the conditions as they exist should help us to realize this hope.

When finally we emerge from this distressing period we shall find ourselves at the beginning of a new agricultural era. Heretofore we have produced more food products than were needed by our own people. We had land in abundance and of great fertility. Our population is increasing rapidly. We have taken up most of our easily cultivated land. We are not far from the time when home needs will require practically all that we produce in the average year. This means a more intensive agriculture, with larger production per acre and lessened cost, if we are to meet foreign competition and still maintain our standards of living.

The Department of Agriculture is planning to meet these new conditions by strengthening its work in certain directions. Its appropriations from the Federal Government are set forth in the pages which follow. A study of the regular appropriations will show that very nearly two-thirds of the money is spent for regulatory and service work which is of more direct value to the consuming public than to the producers on the farm. The money made available for scientific research and its application to farm problems should be increased in the national interest. As has been said, such money is in the nature of an investment. It results in vast additions to our national wealth. The amounts asked for the coming year, and which have been approved by the Bureau of the Budget, have been reduced to the minimum. In the future these appropriations should be increased just as rapidly as the organization and administration of the department gives reasonable assurance that increased money will be used wisely.

It is planned during the coming year to strengthen certain phases of the work of the department, more especially the scientific research, the application of the results of research to farm practice, more extended studies of marketing farm crops with a view to reducing cost, investigations of both production and consumption at home and abroad for the purpose of better adjusting our own production to market needs, and studies looking toward making available to the farmer those devices of modern business which provide needed credit on easy terms and which may help us to distribute production risks more equitably.

This is a creative department. Also it is a department of service. Its task is to conserve and increase national wealth through the wise utilization of the soil and its products, having in mind constantly the maintenance of the fertility of the soil for the use of the generations to follow us.

In such a task the department should have both the liberal financial support of the Government and the sympathetic interest of all our people.

Respectfully,

HENRY C. WALLACE,  
*Secretary of Agriculture.*

### Appropriations.

The cost to the Federal Government of the research, extension, service, and regulatory activities of the department during the fiscal year 1921 was approximately \$32,000,000, as indicated by the following table:

*Federal appropriations available for regular work of department.*

|   |                        |
|---|------------------------|
| Agricultural appropriation act, 1921-----   | \$31, 712, 784. 00     |
| Less—   |                        |
| Appropriations for State agricultural experiment stations-----  | \$1, 440, 000          |
| Smith-Lever supplementary funds-----  | 1, 500, 000            |
| Short-time rural credits -----  | 5, 000                 |
| Immediately available appropriations expended during 1920-----  | 11, 868                |
|   | <hr/> 2, 956, 868. 00  |
|   | 28, 755, 916. 00       |
| Agricultural appropriation act, 1922, immediately available for expenditure during 1921 (exclusive of \$2,000,000 for seed-grain loans to farmers)----- | 218, 300. 00           |
| Deficiency appropriation act, March 1, 1921-----  | 1, 153, 000. 00        |
| Deficiency appropriation act, June 16, 1921 (exclusive of \$125,000 for printing and binding)-----  | 496, 000. 00           |
| Permanent annual appropriation for meat inspection-----   | 3, 000, 000. 00        |
| Protection of lands involved in Oregon and California forfeiture suits (Forest Service)-----  | 25, 000. 00            |
| Balances of appropriations from prior years-----  | 3, 130, 972. 49        |
| Printing and binding fund (sundry civil appropriation act, 1921, and deficiency appropriation act of June 16, 1921)---                                  | 850, 000. 00           |
|   | <hr/> 37, 629, 188. 49 |
| Unexpended balances, June 30, 1921-----   | 2, 847, 308. 90        |
|   | <hr/> 34, 781, 884. 59 |
| Less receipts, 1921, deposited in U. S. Treasury (see p. 69)---   | 2, 514, 879. 37        |
|   | <hr/> 32, 267, 005. 22 |

In addition, the following special funds were available for work incident to the department's regular activities:

*Special appropriations from receipts.*

|   |  |
|---|--|
| Roads and trails for States (construction and improvement of roads and trails within national forests)----- | \$892, 492. 00   |
| Paid from national forest receipts for fiscal year 1921 (see p. 69)-----                                    | \$472, 025. 24   |
| Balance from receipts, fiscal year 1920-----  | 420, 466. 84   |
| Cooperative work, Forest Service (contributions from private sources)-----                                  | 2, 674, 737. 61  |
| Receipts for fiscal year 1921 (see p. 69)---  | \$1, 965, 678. 20  |
| Balance from receipts, fiscal year 1920----   | 709, 059. 41   |
|   | <hr/> 3, 567, 229. 70  |
| Actual expenditures from special funds-----   | 2, 488, 979. 49  |
|   | <hr/> Unexpended balance, June 30, 1921 (available for expenditure during fiscal year 1922)----- |
|   | 1, 078, 250. 21  |

The total expenditure of \$32,000,000 for the regular work of the department was allotted by types of activity approximately as follows: Research, \$9,000,000; extension, \$3,000,000; service, \$3,000,000; and regulatory work, \$17,000,000.

In this connection it should be pointed out that over one-half of the funds for service and regulatory work were expended in the performance of the primary functions of government rather than for the direct development of agriculture. Such functions as the administration and protection of the national forests, the weather service, enforcement of the food and drugs act and the meat-inspection law, as well as other similar service and law enforcement work, are not conducted in the interest of the producer, but administered for the benefit of all.

The department received during the fiscal year 1921 the following amounts, which were covered into the Treasury:

*Receipts of Department of Agriculture, fiscal year 1921.*

|  |                 |
|--|-----------------|
| Weather Bureau: Receipts from United States telegraph lines—   | \$6, 365. 84    |
| Forest Service: Sales of timber, grazing fees, and use of forest lands (exclusive of receipts used for construction of roads and trails for States)----- | 2, 032, 909. 97 |
| Bureau of Chemistry:   |                 |
| Examination of samples of flour, oleomargarine, etc.-----  | 1, 465. 00      |
| Sale of hearings-----  | 126. 40         |
| Bureau of Biological Survey: Sale of animal skins-----   | 9, 734. 85      |
| Bureau of Soils: Sale of kelp, char, potash, and carbon-----   | 13, 812. 93     |
| Division of Publications: Sale of maps, prints, lantern slides, and card indexes-----  | 1, 897. 35      |
| States Relations Service: Sale of products grown at insular experiment stations-----   | 5, 153. 71      |
| Bureau of Markets:   |                 |
| Inspection of food products-----   | 97, 352. 00     |
| Grain standard appeals-----  | 21, 948. 43     |
| Warehouse disputes-----  | 2, 847. 00      |
| Classifying cotton-----  | 144, 530. 80    |
| Sale of cotton standards-----  | 16, 351. 40     |
| Sale of loose cotton-----  | 16, 630. 93     |
| Sale of grain-----   | 10, 817. 77     |
| Federal Horticultural Board: Charges for fumigating cars and wagons-----   | 60, 382. 50     |
| Various bureaus: Miscellaneous collections, including sale of condemned Government property-----   | 72, 552. 40     |
|  | <hr/>           |
|  | 2, 514, 879. 37 |
| Forest Service:  |                 |
| Sale of timber, grazing fees, and use of forest lands (applicable to construction of roads and trails)-----  | \$472, 025. 25  |
| Contributions for cooperative work-----  | 1, 965, 678. 20 |
|  | <hr/>           |
|  | 2, 437, 703. 45 |
| Total receipts, 1921-----  | <hr/>           |
|  | 4, 952, 582. 82 |

70 *Yearbook of the Department of Agriculture, 1921.*

In addition to the \$32,000,000 expended by the department for the conduct of its investigative, regulatory, and other routine activities, appropriations amounting to \$269,513,180.34 were administered by the department, though no part of them was applied to the prosecution of its regular work. These funds were provided for the following purposes:

|  |                     |
|--|---------------------|
| For extension work in agriculture and home economics (provided by the Smith-Lever Act of May 8, 1914, and paid direct to the States)-----              | \$3, 580, 000. 00   |
| Supplementary Smith-Lever agricultural extension work (provided by the Agricultural appropriation act for 1921)-----                                   | 1, 500, 000. 00     |
| Federal aid road construction (provided by the acts of July 11, 1916, and February 28, 1919, including balances from prior years)-----                 | 259, 703, 180. 34   |
| Rural post roads-----  | \$251, 154, 318. 39 |
| Roads and trails within or adjacent to national forests-----   | 8, 548, 861. 95     |
| Farmers' seed-grain loans (made immediately available by the Agricultural appropriation act for the fiscal year 1922 for expenditure during 1921)----- | 2, 000, 000. 00     |
| Payments from national forest receipts for the benefit of county schools and roads-----  | 1, 285, 000. 00     |
| Research work of State agricultural experiment stations (provided by the Agricultural appropriation act for 1921 and paid direct to the States)-----   | 1, 440, 000. 00     |
| Study of short-time rural credits (provided by the Agricultural appropriation act for 1921 for use of a special congressional committee)-----          | 5, 000. 00          |
| Total-----   | 269, 513, 180. 34   |

The number of employees in the department on June 30, 1921, was 18,748, a decrease of 628 from June 30, 1920.

\$62,535,842.54 of this amount was actually expended during the fiscal year 1921, leaving a balance of \$187,167,837.80 available for expenditure during the fiscal year 1922.

## Review of Agricultural Production and Exports.

Acreage of crops in the United States.

| Crop.               | 1921 (preliminary estimate). | 1920        | 1919        | 1918        | 1917        | 1916        | 1915        | 1914          | Annual average, 1910-1914. |
|---------------------|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|----------------------------|
| <b>CEREALS.</b>     |                              |             |             |             |             |             |             |               |                            |
| Corn.....           | 103,850,000                  | 101,699,000 | 97,170,000  | 104,467,000 | 116,730,000 | 105,290,000 | 106,197,000 | 103,435,000   | 105,240,000                |
| Wheat.....          | 62,408,000                   | 61,143,000  | 75,694,000  | 59,181,000  | 45,089,000  | 52,316,000  | 60,469,000  | 53,541,000    | 48,953,000                 |
| Oats.....           | 44,826,000                   | 42,491,000  | 40,359,000  | 44,349,000  | 48,553,000  | 41,527,000  | 40,996,000  | 39,442,000    | 38,014,000                 |
| Barley.....         | 7,240,000                    | 7,600,000   | 6,720,000   | 9,740,000   | 8,933,000   | 7,757,000   | 7,148,000   | 7,565,000     | 7,305,000                  |
| Rye.....            | 4,228,000                    | 4,409,000   | 6,307,000   | 6,391,000   | 4,317,000   | 3,213,000   | 3,129,000   | 2,541,000     | 2,805,000                  |
| Buckwheat.....      | 671,000                      | 701,000     | 700,000     | 1,027,000   | 924,000     | 828,000     | 769,000     | 792,000       | 826,000                    |
| Rice.....           | 896,000                      | 1,336,000   | 1,063,000   | 1,118,550   | 980,900     | 869,000     | 803,000     | 694,000       | 733,000                    |
| Grain sorghums..... | 4,652,000                    | 5,120,000   | 5,060,000   | 6,036,000   | 5,153,000   | 3,944,000   | 4,153,000   | .....         | .....                      |
| Total.....          | 228,771,000                  | 224,499,000 | 233,073,000 | 232,309,550 | 225,679,900 | 215,750,000 | 223,664,000 | 1,207,010,000 | 1,203,664,000              |
| <b>VEGETABLES.</b>  |                              |             |             |             |             |             |             |               |                            |
| Potatoes.....       | 3,815,000                    | 3,657,000   | 3,542,000   | 4,295,000   | 4,384,000   | 3,565,000   | 3,734,000   | 3,711,000     | 3,686,000                  |
| Sweet potatoes..... | 1,066,000                    | 992,000     | 941,000     | 940,000     | 919,000     | 774,000     | 731,000     | 603,000       | 611,000                    |
| Total.....          | 4,881,000                    | 4,649,000   | 4,483,000   | 5,235,000   | 5,303,000   | 4,339,000   | 4,465,000   | 4,314,000     | 4,297,000                  |
| Tobacco.....        | 1,473,000                    | 1,960,000   | 1,951,000   | 1,647,100   | 1,518,000   | 1,413,000   | 1,369,900   | 1,224,000     | 1,209,000                  |
| Cotton.....         | 30,509,000                   | 35,878,000  | 33,556,000  | 36,008,000  | 33,841,000  | 34,985,000  | 31,412,000  | 36,832,000    | 35,330,000                 |
| Grand total.....    | 265,634,000                  | 266,986,000 | 273,073,000 | 275,199,650 | 266,341,900 | 256,487,000 | 260,910,900 | 249,880,000   | 245,520,000                |

<sup>1</sup> Excluding grain sorghums.

*Crop production in the United States.*

[The figures are in round thousands—i. e., 000 omitted.]

| Crop.                                | 1921 (preliminary estimate) | 1920      | 1919      | 1918      | 1917      | 1916      | 1915      | 1914             | Annual average, 1910-1914. |
|--------------------------------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|----------------------------|
| <b>CEREALS.</b>                      |                             |           |           |           |           |           |           |                  |                            |
| Corn.....bushels..                   | 3,080,372                   | 3,203,584 | 2,811,302 | 2,502,665 | 3,065,233 | 2,566,927 | 2,994,763 | 2,672,804        | 2,732,457                  |
| Wheat.....do.....                    | 794,883                     | 833,027   | 987,979   | 921,438   | 636,655   | 636,318   | 1,025,801 | 891,017          | 738,225                    |
| Oats.....do.....                     | 1,060,737                   | 1,493,281 | 1,184,080 | 1,538,124 | 1,592,740 | 1,251,837 | 1,549,080 | 1,141,060        | 1,157,961                  |
| Barley.....do.....                   | 151,181                     | 189,332   | 147,608   | 255,225   | 211,759   | 182,309   | 228,851   | 194,953          | 186,208                    |
| Rye.....do.....                      | 57,918                      | 60,490    | 75,483    | 91,041    | 63,933    | 48,862    | 64,050    | 42,779           | 37,568                     |
| Buckwheat.....do.....                | 14,079                      | 13,142    | 14,399    | 16,905    | 16,022    | 11,662    | 15,056    | 16,881           | 17,022                     |
| Rice.....do.....                     | 35,105                      | 52,066    | 41,985    | 38,608    | 34,739    | 40,861    | 28,947    | 23,649           | 24,378                     |
| Grain sorghums.....do.....           | 115,110                     | 137,408   | 130,724   | 73,241    | 61,409    | 53,858    | 114,460   | .....            | .....                      |
| Total.....do.....                    | 5,309,385                   | 5,990,330 | 5,373,520 | 5,438,245 | 5,681,480 | 4,792,694 | 6,010,988 | 4,983,143        | 4,883,819                  |
| <b>VEGETABLES.</b>                   |                             |           |           |           |           |           |           |                  |                            |
| Potatoes.....bushels..               | 346,823                     | 403,296   | 322,897   | 411,860   | 442,108   | 286,953   | 359,721   | 409,921          | 360,772                    |
| Sweet potatoes.....do.....           | 98,660                      | 103,925   | 97,126    | 87,924    | 83,822    | 70,955    | 75,689    | 56,574           | 57,117                     |
| Beans (commercial).....do.....       | 9,118                       | 9,077     | 13,349    | 17,397    | 16,045    | 10,715    | 10,321    | 11,585           | .....                      |
| Onions (commercial).....do.....      | 12,833                      | 23,525    | 11,398    | 19,336    | 12,976    | 8,592     | 7,664     | ( <sup>2</sup> ) | .....                      |
| Cabbage (commercial).....tons.....   | 665                         | 982       | 357       | 498       | 475       | 255       | 671       | ( <sup>2</sup> ) | .....                      |
| <b>FRUITS.</b>                       |                             |           |           |           |           |           |           |                  |                            |
| Peaches.....bushels..                | 32,723                      | 45,620    | 53,178    | 33,094    | 48,765    | 37,505    | 64,097    | 54,109           | 45,842                     |
| Pears.....do.....                    | 10,705                      | 16,805    | 15,101    | 13,362    | 13,281    | 11,874    | 11,216    | 12,086           | 11,184                     |
| Apples.....do.....                   | 96,381                      | 223,677   | 142,086   | 169,625   | 166,749   | 193,905   | 230,011   | 253,200          | 197,898                    |
| Cranberries (3 States).....barrels.. | 373                         | 449       | 549       | 352       | 249       | 471       | 441       | 697              | .....                      |

| MISCELLANEOUS.                   |           |           |           |           |           |           |           |           |         |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| Flaxseed.....bushels..           | 8,112     | 10,774    | 7,256     | 13,369    | 9,164     | 11,296    | 14,080    | 13,749    | 18,353  |
| Sugar beets.....tons..           | 7,782     | 8,338     | 6,421     | 5,949     | 5,960     | 6,228     | 6,511     | 5,555     | 5,391   |
| Tobacco.....pounds..             | 1,117,682 | 1,582,225 | 1,465,481 | 1,439,071 | 1,249,276 | 1,133,278 | 1,062,287 | 1,034,679 | 991,638 |
| All hay.....tons..               | 96,802    | 105,315   | 104,760   | 91,139    | 96,439    | 110,992   | 107,263   | 88,666    | 81,640  |
| Cotton.....bales..               | 7,953     | 13,440    | 11,421    | 12,041    | 11,302    | 11,430    | 11,192    | 10,135    | 14,259  |
| Sorghum sirup.....gallons..      | 45,554    | 49,305    | 39,413    | 33,387    | 37,472    | 13,608    | 14,823    | 13,551    | 14,974  |
| Peanuts.....pounds..             | 510,466   | 541,474   | 788,273   | 1,240,102 | 1,432,581 | 919,028   |           |           |         |
| Broom corn (5 States).....tons.. | * 35      | * 36      | 53        | 62        | 57        | 39        | 52        |           |         |
| Clover seed.....bushels..        | 1,411     | 1,944     | 1,454     | 1,197     | 1,458     | 1,706     |           |           |         |

<sup>1</sup> Excludes grain sorghums.

\* No estimate.

<sup>17</sup> States.



## Exports of domestic foodstuffs and cotton from the United States.

[Reports of Bureau of Foreign and Domestic Commerce, United States Department of Commerce.]

| Article exported.                       | Year ending June 30— |                        |                |                |                |                |                |                |               | Annual average, 1910-1914. |
|---|----------------------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------------------|
|   | 1921                 |                        | 1920           | 1919           | 1918           | 1917           | 1916           | 1915           |               |                            |
|   | Amount.              | Per cent of 1910-1914. |                |                |                |                |                |                |               |                            |
| Wheat.....bushels..                     | 293,267,637          | 515.3                  | 122,430,724    | 178,582,673    | 34,118,853     | 149,831,427    | 173,271,015    | 259,642,533    | 56,913,228    |                            |
| Wheat flour.....barrels..               | 16,153,234           | 151.5                  | 21,651,961     | 24,181,979     | 21,879,951     | 11,942,778     | 15,520,669     | 16,152,765     | 10,678,635    |                            |
| Oats.....bushels..                      | 4,302,346            | 51.8                   | 33,944,740     | 96,360,974     | 105,837,309    | 88,944,401     | 95,918,884     | 96,809,551     | 9,304,203     |                            |
| Rye.....do..                            | 45,735,052           | 5,350.6                | 37,463,285     | 27,540,188     | 11,990,123     | 13,260,015     | 14,532,437     | 12,544,585     | 854,765       |                            |
| Barley.....do..                         | 20,457,198           | 259.1                  | 26,571,284     | 20,457,791     | 26,285,378     | 16,381,077     | 27,473,160     | 26,754,522     | 7,595,721     |                            |
| Corn.....do..                           | 66,911,093           | 168.1                  | 14,467,926     | 16,687,538     | 40,997,827     | 64,720,842     | 38,217,012     | 48,756,291     | 39,806,690    |                            |
| Total, 5 cereals and flour.....pounds.. | 28,195,776,780       | 334.5                  | 16,859,428,924 | 21,996,905,576 | 13,951,418,808 | 19,330,110,628 | 20,759,577,136 | 26,567,042,632 | 8,429,735,124 |                            |
| Sugar.....do..                          | 582,698,458          | 821.0                  | 1,444,030,665  | 1,115,865,161  | 576,433,080    | 1,248,908,286  | 1,630,150,863  | 549,007,411    | 70,976,908    |                            |
| Dairy products:                         |                      |                        |                |                |                |                |                |                |               |                            |
| Butter.....do..                         | 7,829,255            | 183.0                  | 27,155,834     | 33,739,960     | 17,735,966     | 26,535,092     | 13,487,481     | 9,850,704      | 4,277,955     |                            |
| Cheese.....do..                         | 10,825,003           | 220.2                  | 19,378,153     | 18,791,553     | 44,303,076     | 66,050,013     | 44,394,301     | 55,362,917     | 4,915,502     |                            |
| Milk (condensed).....do..               | 296,506,031          | 1,699.5                | 710,535,270    | 728,740,509    | 528,759,232    | 259,141,231    | 159,577,920    | 37,235,627     | 15,773,900    |                            |
| Total dairy products.....pounds..       | 255,160,849          | 1,142.1                | 757,067,262    | 781,272,022    | 590,798,274    | 352,026,336    | 217,459,402    | 102,449,243    | 24,967,357    |                            |

| Meat and meat products:                                |                |         |                |                |                |                |                |                |                |  |
|--|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|
| Canned beef.....do.....                                | 10,785,306     | 114.8   | 31,133,918     | 108,459,660    | 97,343,283     | 67,536,125     | 50,803,765     | 75,243,261     | 9,392,122      |  |
| Fresh beef.....do.....                                 | 21,084,203     | 71.6    | 153,560,647    | 332,205,176    | 370,082,900    | 197,177,101    | 281,214,000    | 170,440,934    | 29,452,302     |  |
| Pickled beef.....do.....                               | 23,312,856     | 70.9    | 32,383,501     | 45,065,641     | 54,467,910     | 58,053,667     | 38,114,682     | 31,874,743     | 32,898,172     |  |
| Oleo oil.....do.....                                   | 106,414,800    | 38.0    | 74,520,494     | 59,292,122     | 56,603,388     | 67,110,111     | 102,645,914    | 80,481,946     | 280,224,505    |  |
| Oleomargarine.....do.....                              | 6,219,165      | 190.3   | 20,952,180     | 18,570,400     | 6,309,896      | 5,651,267      | 5,426,221      | 5,252,183      | 3,268,279      |  |
| Stearin.....pounds.....                                | 19,177,311     | 592.9   | 22,505,002     | 11,597,284     | 10,360,030     | 12,936,357     | 13,062,247     | 11,457,907     | 1,3,234,533    |  |
| Tallow.....do.....                                     | 16,843,868     | 58.1    | 32,967,026     | 16,172,111     | 5,014,964      | 15,209,369     | 16,288,743     | 20,239,988     | 29,006,749     |  |
| Canned pork.....do.....                                | 1,118,967      | 26.5    | 3,261,967      | 5,273,329      | 5,194,468      | 5,896,126      | 9,610,732      | 4,444,418      | 4,227,086      |  |
| Fresh pork.....do.....                                 | 57,043,446     | 2,818.5 | 27,224,941     | 19,644,388     | 21,390,288     | 50,435,615     | 63,005,524     | 3,906,193      | 2,023,911      |  |
| Bacon.....do.....                                      | 489,298,109    | 268.1   | 803,666,861    | 1,238,247,321  | 815,294,424    | 687,151,972    | 579,808,786    | 346,713,227    | 182,474,092    |  |
| Hams and shoulders.....pounds.....                     | 172,011,676    | 103.1   | 275,455,931    | 667,240,022    | 419,571,869    | 266,656,581    | 282,208,611    | 203,701,114    | 166,813,134    |  |
| Pickled pork.....do.....                               | 33,286,062     | 69.0    | 41,643,110     | 31,503,997     | 33,221,502     | 46,992,721     | 63,460,713     | 45,655,574     | 48,274,929     |  |
| Lard.....do.....                                       | 746,157,356    | 157.3   | 587,224,549    | 724,771,383    | 392,506,355    | 444,769,540    | 427,011,338    | 475,531,906    | 474,354,914    |  |
| Lard, neutral.....do.....                              | 22,544,303     | 51.7    | 23,202,027     | 17,365,858     | 4,258,529      | 17,576,240     | 34,426,980     | 26,021,054     | 24,571,550     |  |
| Lard compounds.....do.....                             | 42,155,971     | 62.6    | 44,195,842     | 128,157,327    | 31,278,382     | 56,359,493     | 52,843,311     | 69,980,614     | 67,318,857     |  |
| Sausage, canned.....do.....                            | 4,429,723      | 68.5    | 7,034,150      | 8,503,580      | 5,787,108      | 6,294,950      | 6,823,085      | 1,821,958      | 6,369,268      |  |
| Sausage, other.....do.....                             | 4,926,552      | .....   | 14,750,963     | 9,721,925      | 9,289,341      | 9,134,471      | 8,590,226      | 5,183,525      | .....          |  |
| Sausage casings.....do.....                            | 29,894,684     | 88.9    | 24,379,414     | 13,524,063     | 6,173,578      | 6,118,060      | 14,708,893     | 30,816,551     | 83,644,928     |  |
| Total 18 meat products.....pounds.....                 | 1,806,704,358  | 127.5   | 2,220,042,132  | 3,455,285,647  | 2,344,048,215  | 2,001,059,766  | 2,000,063,391  | 1,608,978,998  | 1,416,546,331  |  |
| Total of food products mentioned above.....pounds..... | 30,870,340,515 | 310.5   | 21,280,568,983 | 27,349,328,406 | 17,462,748,347 | 22,982,108,016 | 24,628,240,792 | 28,827,475,889 | 9,942,225,720  |  |
| Cotton.....do.....                                     | 2,811,445,550  | 63.6    | 3,543,743,487  | 2,762,946,754  | 2,320,511,665  | 3,088,080,786  | 3,084,070,125  | 4,408,578,499  | 4,419,802,157  |  |
| Grand total.....do.....                                | 38,681,786,065 | 284.5   | 24,824,312,470 | 30,112,275,160 | 19,788,260,012 | 26,020,185,802 | 27,712,310,917 | 33,231,055,888 | 14,362,027,877 |  |
| 1 2-year average. 2 4-year average.                    |                |         |                |                |                |                |                |                |                |  |

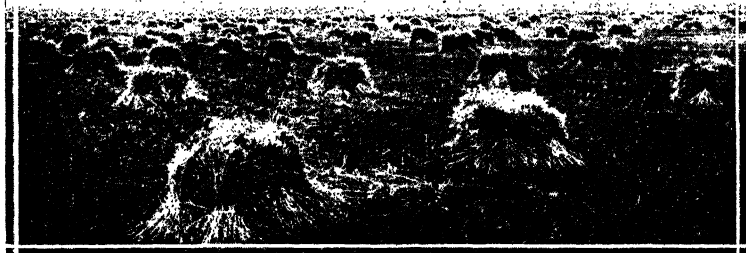
*Estimated production of meat and wool.*

[The figures are in round thousands, i. e., 000 omitted.]

| Product.                                  | 1921       | 1920       | 1919       | 1918       | 1917       | 1916       | 1914       | 1909       |
|---|------------|------------|------------|------------|------------|------------|------------|------------|
| Beef and veal <sup>1</sup> .....lbs.....  | 7,082,029  | 7,399,085  | 7,142,823  | 8,110,733  | 7,384,007  | 6,670,938  | 6,078,908  | 8,138,000  |
| Pork and lard <sup>1</sup> .....do.....   | 10,570,411 | 10,215,106 | 11,022,263 | 10,869,712 | 8,450,148  | 10,587,765 | 8,768,532  | 8,199,000  |
| Mutton and goat <sup>1</sup> .....do..... | 601,628    | 542,575    | 611,124    | 504,135    | 491,205    | 633,969    | 739,401    | 615,000    |
| Total.....do.....                         | 18,254,068 | 18,156,766 | 18,776,210 | 19,484,580 | 16,325,360 | 17,992,672 | 15,586,841 | 16,952,000 |
| Wool (including pulled wool).....do.....  | 273,064    | 277,908    | 298,258    | 298,870    | 281,892    | 288,480    | 280,192    | 289,420    |

<sup>1</sup> Estimated for 1914-1921 by the Bureau of Animal Industry.

# WHEAT PRODUCTION *and* MARKETING



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## Importance of the Wheat Crop.

**W**HEAT is one of the most important crops of the United States. It is important because (a) many farmers grow it, (b) a large acreage of land is annually devoted to it, (c) it constitutes an important part of our domestic commerce, (d) it contributes a large part of the value of the exports of the nation, and, most important of all, (e) it is the national bread crop.

In some areas in the United States wheat is almost the only source of income. About one-third, or approximately 2 millions, of the farmers of the United States grow wheat. In many of the northern States more than one-half, and in large areas over 80 per cent, of the farmers are engaged in wheat growing (Fig. 1). In 1921 over 62 millions of acres were harvested. Only corn and hay exceed wheat in the acreage occupied. In the great wheat-growing States there are areas in which more than 50 per cent of the total cultivated land is given over to wheat. In these areas, where there is such specialization in wheat growing, whatever

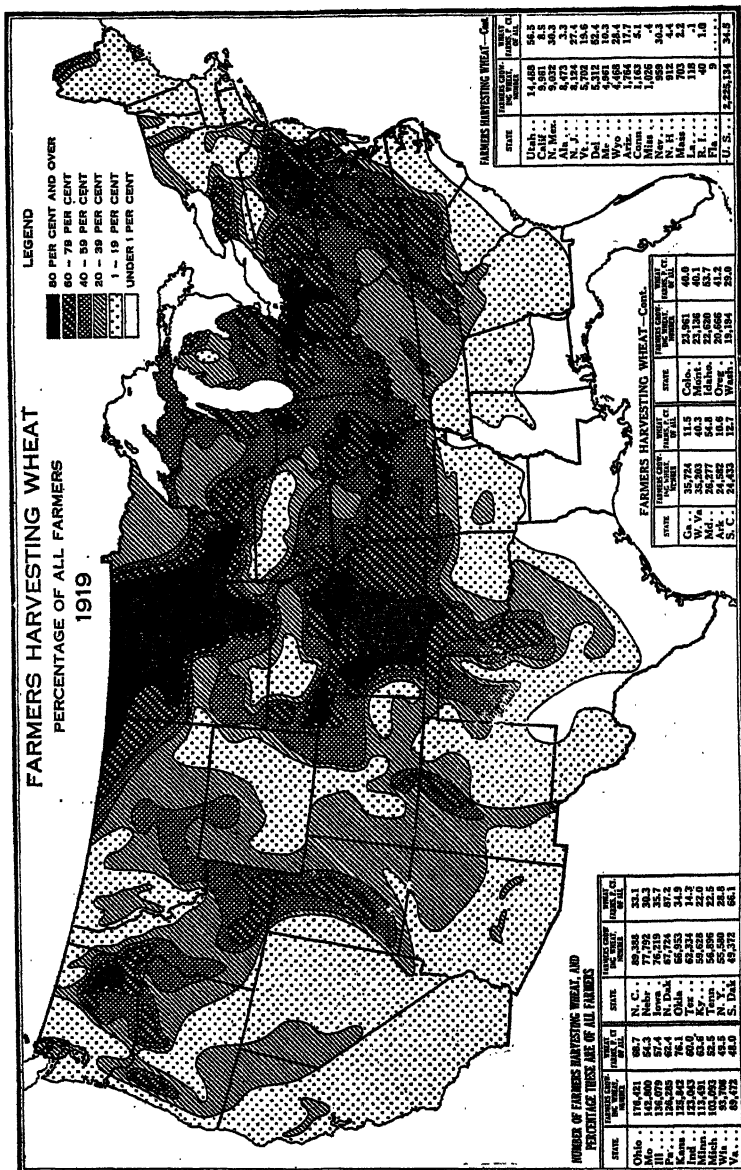


FIG. 1.—Map showing the percentage of all farmers harvesting wheat in 1919. The black areas show where 80 per cent or more of the farmers grow wheat. In New England, the South, and the Southwest comparatively few farmers grow it.

affects yields, cost of production, or the price of wheat not only directly affects the welfare of all the farmers who are dependent upon the crop for a part or all of their income, but also vitally affects the whole community.

Wheat plays an important part in the commercial life of the nation. Normally it is fourth in value among all our crops, being outranked only by corn, hay, and cotton. It enters into the trade to a far greater extent than any other of these crops except cotton. The South, which produces cotton, is dependent upon the North for its wheat and flour. The manufacturing cities of the East depend upon the Midwest for most of their bread supplies.

Wheat and flour made from wheat constitute a very important part of our international trade (Fig. 2). In value of crops exported it stands second only to cotton. Both corn and hay have a total-product value greater than that of wheat, but are exported principally through meat products. Of these products only pork exceeds wheat in value.

Wheat is our great bread crop. The farmers of the United States regularly produce enough wheat not only to supply our own needs for bread but also to export a large quantity to other countries. Our population is increasing, and as consumers we are interested in the trend of wheat production. We want plenty of bread and we want it cheap.

In time of war the supply of wheat is a matter of great concern to the nations involved in the struggle. From the beginning of the World War it was recognized that wheat was as essential to winning the war as were munitions for the Army. The Allies, not having within their own borders a sufficient supply of wheat, made extraordinary efforts to keep open the international trade routes to the countries producing a surplus of wheat.

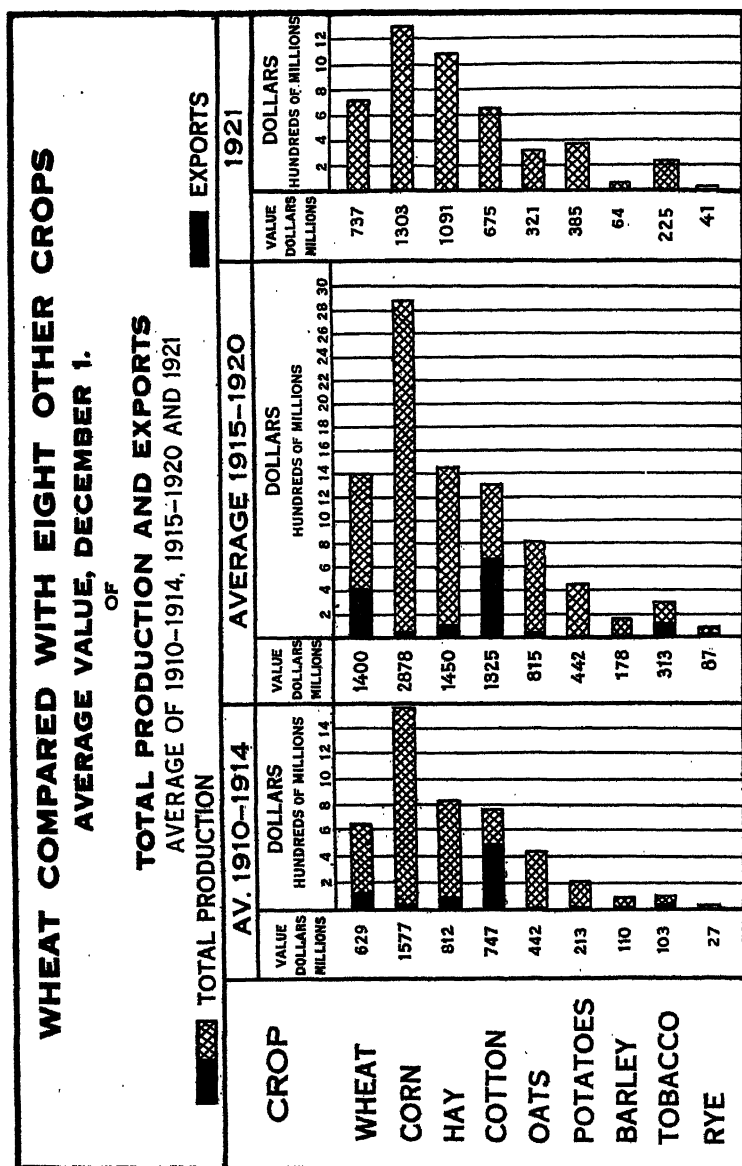


FIG. 2.—Comparative average value of wheat and 8 other crops. Wheat ranked fourth in value in the 11 years 1910 to 1920 and third in 1921, when the value of all crops had shrunken greatly. Wheat ranked second in value of crop exported.

### World Production of Wheat.

The wheat growers of the United States have a vital interest in the wheat production of other countries, because the price of wheat on the farms in the United States is determined, in large measure, by the prices paid in the world markets. The distribution of wheat production in the world is shown graphically by the map in Figure 3 and total production in Figure 4. Certain countries stand out on the map as large producers of wheat. European countries produce large quantities of wheat, but most of them consume large quantities also. The important surplus producing countries which compete with the United States in the world markets are Russia, India, Canada, Argentina, and Australia (Figs. 5 and 6).

Wheat is not grown to any extent in the warm, humid parts of the world. It is confined almost entirely to regions with temperate climates. Where the moisture is not excessive, it may be grown in relatively warm climates, as in northern Africa, India, and Mexico. To the north, in Canada and Russia, production is limited by too short growing seasons. In Australia and Argentina, as well as in some parts of North America and Asia, expansion of area is limited by lack of precipitation. There are no available statistics of wheat production in China. Some wheat is grown in China, but the great food crops of the people in that part of the world are rice and various millets. Within the area suitable for growing wheat it must compete with other grain crops such as oats, corn, barley, and rye.

The large number of producers tends to stabilize the markets and, under normal conditions, to insure the world's bread supply. The crops of Russia and the United States (Figs. 5 and 6) constitute a large part of the world crop, but frequently when the crops of the United States are good the Russian crop is short. In 1911 the crops of both of these great producers were short, but the crops of other countries were good and partly offset the shortage. Thus the several countries supplement each other in producing wheat for the world markets. In years in which crops are short in one or



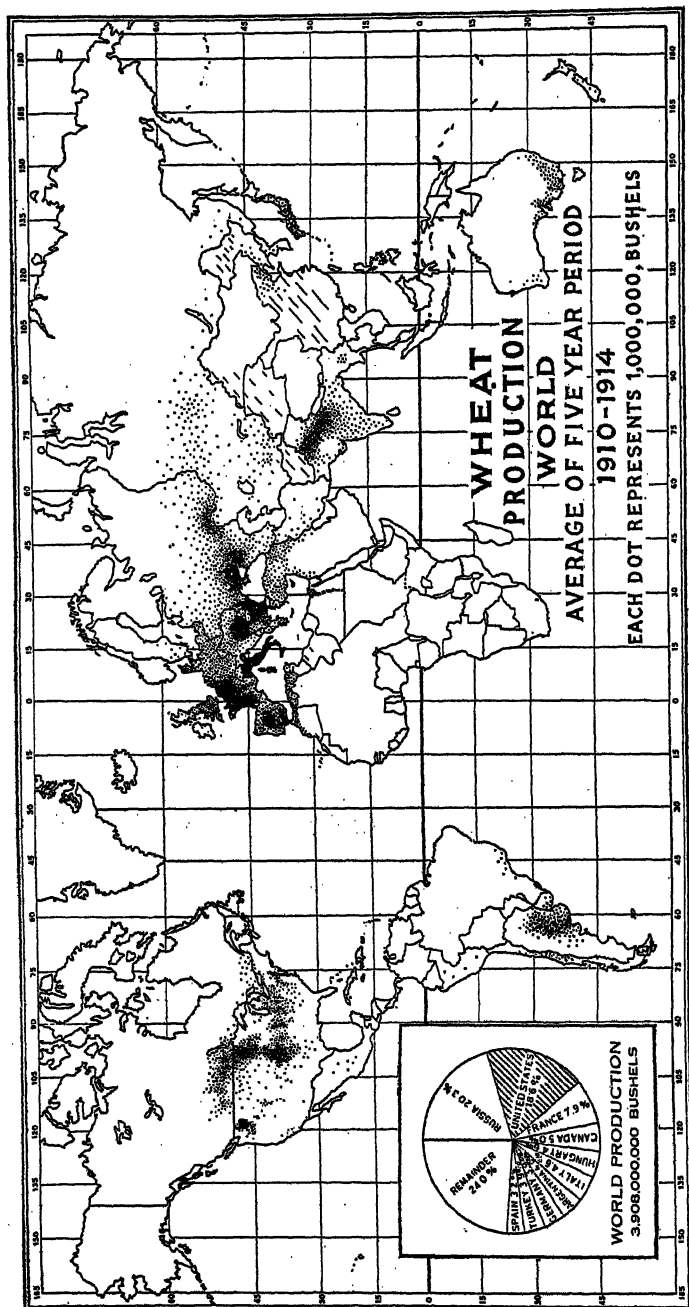


FIG. 3.—World wheat production before the war. Russia was then the greatest producer in the world and the United States was second. No satisfactory statistics of production since the war are available from some important producing countries. The North Temperate Zone produces most of the world wheat.

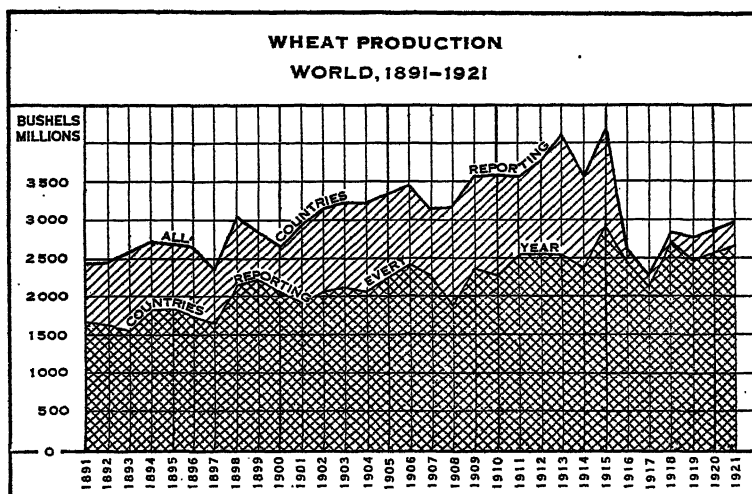


FIG. 4.—World wheat production in the 31 years 1891 to 1921 in all countries reporting. Since the beginning of the World War satisfactory statistics have not been available every year from Russia, Roumania, Bulgaria, Hungary, Austria, and Mexico. Note the steadily increasing production before the war.

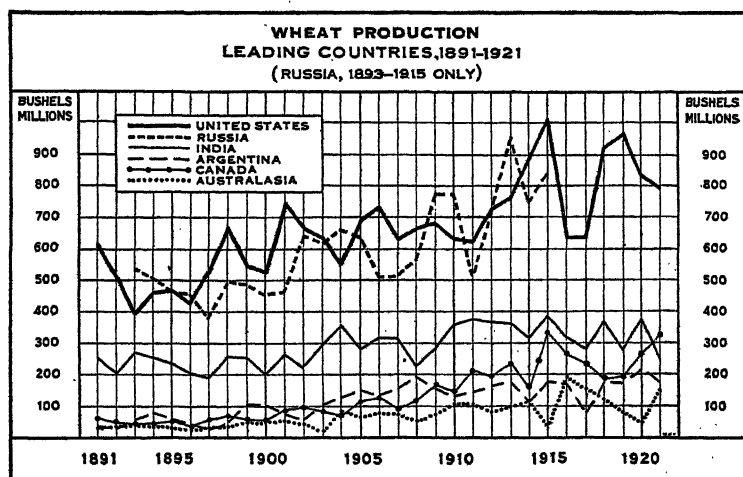


FIG. 5.—Wheat production in the 6 leading countries in the 31 years 1891 to 1921 (Russia 1893 to 1915). The United States and Russia were running a close race before the war. India was easily third until 1921, when Canada jumped into third place. Note the trend of production in each country.

more countries they are likely to be good in other countries, and consequently the world production does not fluctuate as much as production in any one of the important producing countries.

The trend of the world's wheat production is indicated in Figure 4. The trend of production in all the wheat-growing countries taken together was upward until 1915, after which several countries dropped out of the list reporting. The production of countries reporting every year in the period 1891-1921 has increased from about  $1\frac{1}{2}$  billion bushels, average for the first three years, to over  $2\frac{1}{2}$  billion bushels, average for the last three years.

There was a tendency to increase the production of wheat in all the important surplus-producing countries in the first 20 years of the period 1891-1921 (Fig. 5). Since 1904 the average production of India has not increased, and since 1908 the average production of Argentina has increased but little. The production of Canada continues to increase. War

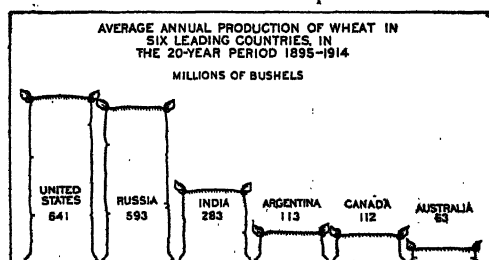


FIG. 6.—Popular presentation of Figure 5 on the wheat production in 6 leading countries.

conditions caused an abnormal expansion in production in the United States, reaching its highest point in 1915. It remains to be seen whether the

United States will resume an upward trend in production after the normal trade relations have been restored. The trend of production in Russia was continuing upward at about the same rate as in the United States until 1915, the last year for which agricultural statistics are available. The wheat farmers in the United States have much reason to be interested in the prospect of the restoration of normal conditions in Russia and the future trend of production in that country, which is our greatest competitor in the wheat markets of the world (Figs. 5 and 6).

## Wheat Production in the United States.

### Trend of Production.

The annual wheat production of the United States has more than trebled in the last 50 years, increasing from about 250 million bushels in the three years 1869-70-71 to over 750 millions in the three years 1919-20-21. As production is the resultant of both acreage harvested and acre yields, both must be examined to find the explanation of this enormous expansion in production (Fig. 7). Between 1870 and 1920 the acreage trebled. The yield per acre also has increased. The increase in production, therefore, has been due largely to expansion of area but partly to increase in acre yields.

As noted above, the increase in wheat production in the last 50 years has been due largely to increase in the area harvested. The increase has not been continuous and regular. Periods of expansion have been followed by a few years of little change or by a slight decline in acreage. Since 1866 there have been three periods of marked expansion, from 1873 to 1880, from 1890 to 1899, and from 1913 to 1919. Will 1921 to 1930 see a repetition of 1881 to 1890, and 1900 to 1910? Perhaps conditions have changed so that history will not repeat itself in this respect.

The rapid rise in acreage and production beginning in 1915 was due, of course, to the demand for wheat caused by the outbreak of the World War. There is a sharp break, however, in the ascending lines in 1916 and 1917. The small decrease in acreage in 1916 was due chiefly to the influence of the enormous production in 1915. The great reduction in production in 1916 was due in part to this reduced acreage but chiefly to the extremely destructive epidemic of black stem rust which occurred that year. The much greater reduction of acreage which occurred in 1917 was due almost wholly to the extraordinary amount of winterkilling, which destroyed 30 per cent of the large acreage of winter wheat which had been sown (Fig. 34). The high peak of acreage reached in 1919, after the war was over, was due partly to the fact that the war was still in progress when the winter

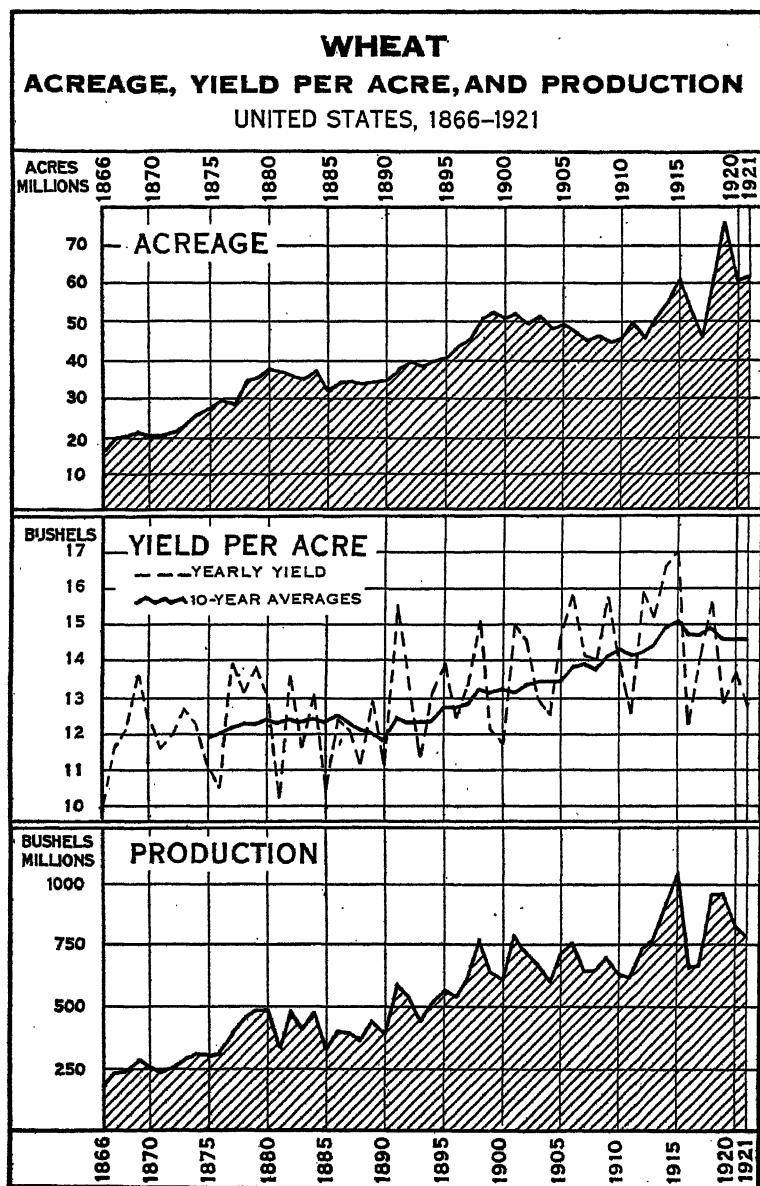


FIG. 7.—Annual acreage, acre yield, and production of wheat in the United States from 1866 to 1921. Estimates of acreage have been revised to accord with census returns. The solid line in yield per acre is a 10-year running average. Note that average yields increased about 3 bushels per acre from 1890 to 1915.

wheat was sown and partly to the attraction of the guaranteed price which was still in effect when the spring wheat was sown, resulting in the large increase in the acreage of both sowings. An explanation of the gradual and general changes in acreages that have occurred will be found in the discussion of the shifts in production, which follows.

In the last three years the acre yields of wheat have been below the average of the last 10 years. Production would have been much larger had the yields in these years equaled the average. The average of yields in the three years 1919-20-21 is only one-half of a bushel above the average of the three years 1869-70-71, but the average acre yield for the 10-year period ending in 1921 is  $2\frac{1}{2}$  bushels above the average for the 10-year period ending in 1875. The trend of yields from 1880 to 1890 was downward, from 1890 to 1915 upward, and from 1915 to date again downward.

The increase in acre yields from 1890 to 1915 was due in part to the shifting of areas of production, expanding high-yielding and reducing low-yielding areas. In some parts of the country improved methods and more intensive cultivation increased yields. The downward trend since 1915 is due largely to adverse seasons, but in part to expansion of area to include low-yielding sections, and probably in part to less intensive culture.

#### Historical Development of Wheat Growing.

Wheat production began on the Atlantic Coast at least as early as 1618 in the Virginia Colony, and moved westward with the advance of settlement. The first great westward shift took place in the period 1783 to 1840. This was the canal-building period, the period of the development of western New York, and the settlement of the eastern Lake Region and the Ohio Valley.

The implements of production in this period were crude and not adapted to wheat growing on a large scale. Much of the seeding still was done by hand. The sickle (Fig. 8) and the cradle (Fig. 9) were used for harvesting, and the flail (Fig. 8) for thrashing. The reaper (Fig. 10) was in process of development, and came into use before the end of the period.

*Wheat production, 1839.*—The census of 1840 gives the wheat production of 1839 as shown in Figure 11. About half of the wheat was grown east and half west of the Allegheny Mountains. New York, Pennsylvania, Virginia, and Ohio produced 60 per cent of the Nation's wheat. The western frontier takes in parts of Wisconsin, Iowa, and Missouri. The eastern boundary of southern wheat production follows closely the fall line from Virginia south to central Georgia. The western wheat was carried eastward by the Great Lakes and the Erie Canal to New York, or southward by river to New Orleans.

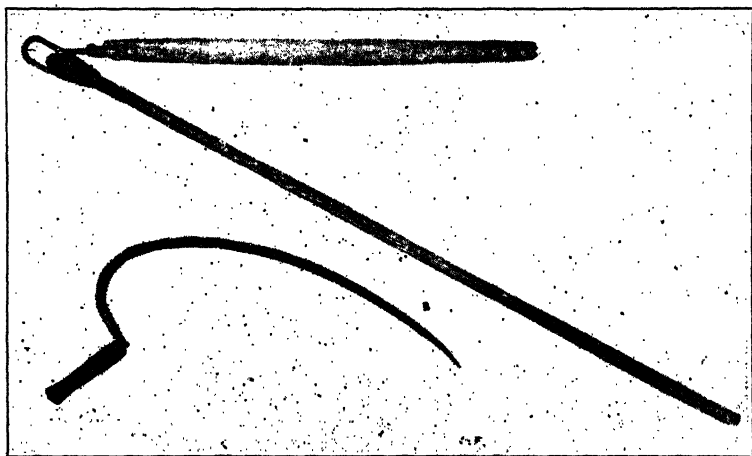


FIG. 8.—The sickle and the flail, used for harvesting and threshing wheat until well into the nineteenth century.

*Wheat production, 1849.*—The total production increased but little in the decade 1839–1849 (Fig. 11). New York, Pennsylvania, Virginia, and Ohio remained the leading States. The crop increased largely in Michigan, Wisconsin, and Illinois and declined somewhat in the far East. A beginning had been made in Oregon, Utah, and New Mexico (not shown on the map). Lakes, rivers, and canals were still the important means of transportation, but railroads now extended from lake ports into the interior of two western States, one across southern Michigan, the other across central Ohio from Sandusky to Cincinnati.



FIG. 9.—The cradle, which followed the sickle as an implement for harvesting. It left the wheat in a windrow for the binders.

*Wheat production, 1859.*—This map (Fig. 12) shows the second great shift in wheat production. Illinois, Indiana, and Wisconsin have become the leading wheat-producing States. The States west of the Alleghenies increased their production from 49 to 119 million bushels, whereas east of the mountains production remained stationary. California and Texas appear on the map for the first time with large crops, California at once taking rank with the leading States. The low production in Ohio and New York in this

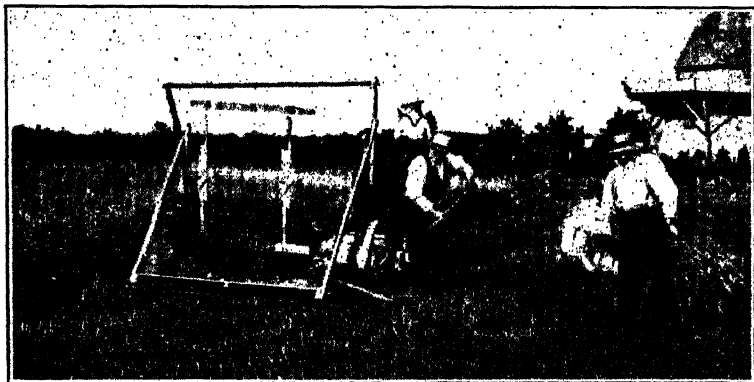


FIG. 10.—Early type of reaper developed about 1830. The grain was raked from the platform by hand. This machine evolved finally into the self-rake reaper still used in this country for harvesting flax and buckwheat.





FIG. 15.—Three modern self-binders in operation. This invention made possible the great expansion of wheat production on the prairies and plains.

year is due to an unfavorable season. A network of railroads now covers the States of the Central West, drawing wheat from the farms in the hearts of these States.

*Wheat production, 1869.*—The States west of the Alleghenies almost doubled their production in the decade 1859–1869 (Fig. 13). The most significant feature is the great increase in production in the regions already occupied. The frontier advanced but little. Small beginnings had been made in Colorado, Montana, and eastern Washington. The first transcontinental railway was just completed and other roads had been extended into Kansas and Minnesota. Chicago and Milwaukee had become the great central markets of the near Northwest.

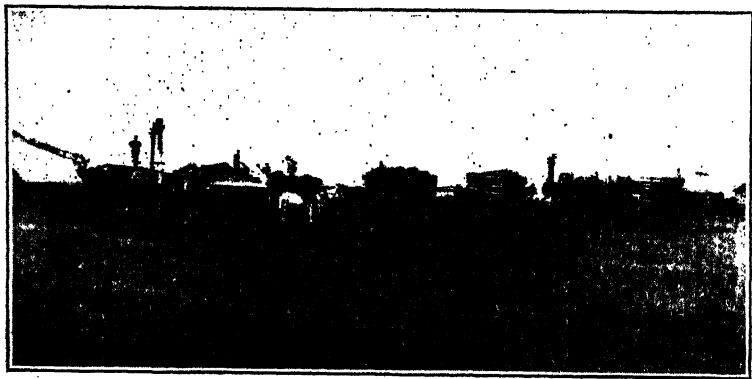


FIG. 16.—The modern grain separator, developed with the self-binder, thrashing wheat from the shock by steam power from a traction engine.

*Wheat production, 1879.*—While production still increases greatly in the States east of the Mississippi River, the wheat belt moves again steadily westward (Fig. 14). The frontier has now advanced into the Red River Valley, and the Kansas-Nebraska development has well begun, while northern Illinois, southern Wisconsin, and eastern Iowa are declining in production. Minnesota, southwestern Illinois, and a district including southern Michigan, western Ohio, and northern Indiana, have markedly increased their production. Dry-land production increased greatly in the Far West.



FIG. 17.—A large-sized combined harvester-thrasher or "combine," drawn by 32 horses and cutting 30 to 40 acres daily. Smaller sizes are becoming popular and tractors often are used for power. These machines cut and thrash the grain at the same time. These and headers are used under dry-land conditions.

Both acreage and production nearly doubled in the 10-year period, 1870-79. This was due in part to the policy of homestead settlement of public land which followed the close of the Civil War, and partly to the development of machinery which made extensive production possible. The self-binder (Fig. 15), and the large separators driven by traction engines (Fig. 16), played important parts in this expansion of wheat growing. Later the giant combined harvester-thrashers (Fig. 17) served the same purpose in the dry-land areas of the Far West.

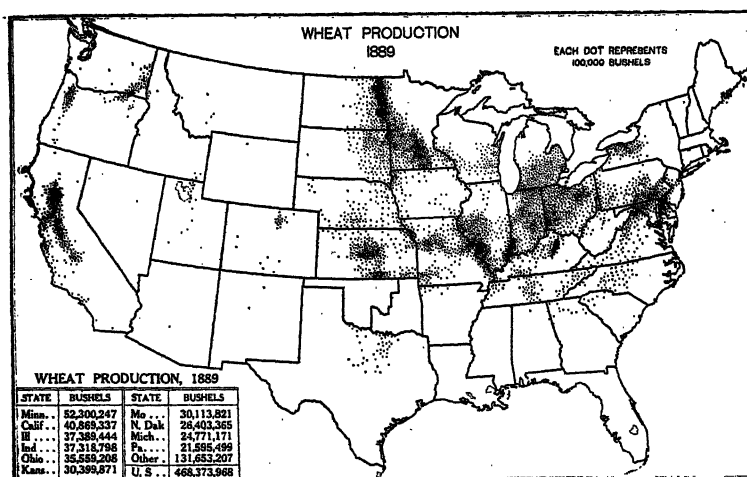


FIG. 18.—Wheat production in the United States in 1889. Production on the prairies and plains of Minnesota, the Dakotas, Nebraska, and Kansas greatly increased, as did also dry-land production in California, Oregon, and Washington. In the Mississippi Valley, except Missouri and southwestern Illinois, there was a marked decrease with a less marked decline eastward to the coast.

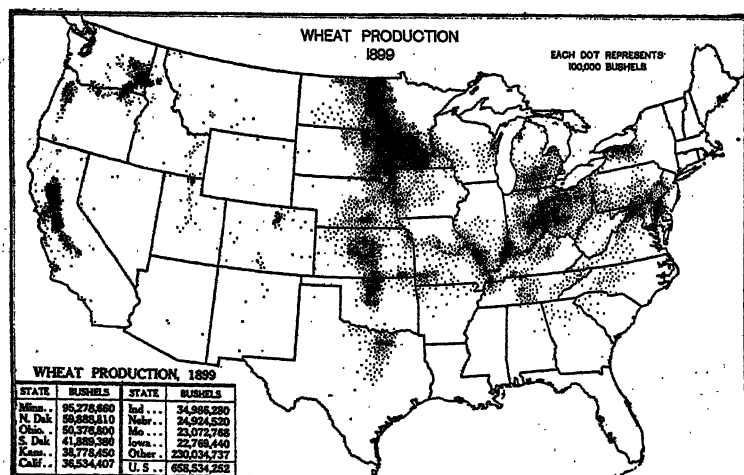


FIG. 19.—Wheat production in the United States in 1899. Enormous expansion of acreage is noted on the prairies in Minnesota and the eastern parts of the Dakotas and on the plains from the Dakotas south to Texas. Dry-land production in Idaho, Washington, and Oregon also is greatly increased. Little change occurs in the East, except in southwestern Illinois.

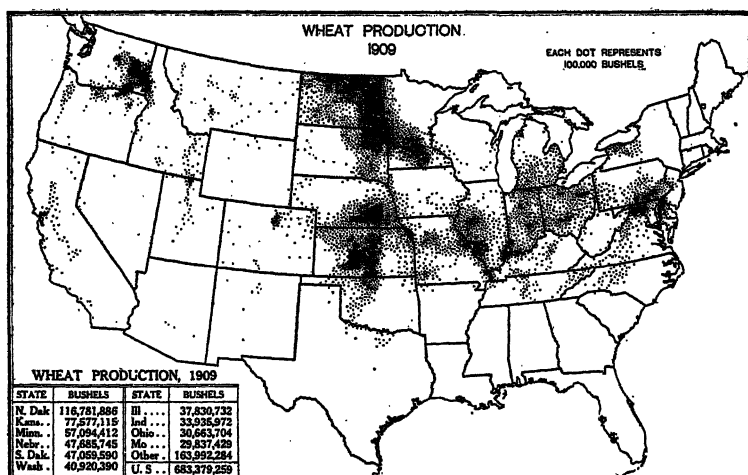


FIG. 20.—Wheat production in the United States in 1909. In the hard spring wheat district of the northern Great Plains area and the hard red winter wheat district of the central Great Plains area there is increased production and steady westward movement of production. There is a marked decline in California and some decline in the Ohio Valley.

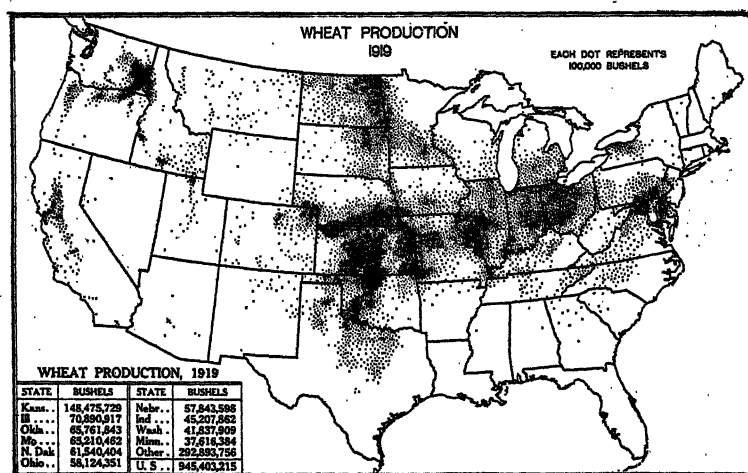


FIG. 21.—Wheat production in the United States in 1919. The stimulus of the World War on wheat production is markedly evident in this year. There was greatly increased production of soft red winter wheat in the central or corn-belt States and of hard red winter wheat in the central section of the Great Plains, but a decreased production of hard red spring wheat in the northern plains because of unfavorable conditions.

*Wheat production, 1889.*—This map (Fig. 18) reveals another remarkable shift in the wheat belt. The spring-wheat district of the northern Great Plains, the hard-winter-wheat district of central Kansas, and the dry-farmed districts of the Far West show a marked increase in acreage. The upper Mississippi Valley shows a decline just as marked. There also has been a slight decline in the East.

*Wheat production, 1899.*—The Red River Valley, the Kansas-Nebraska belt, and the Palouse district blacken (Fig. 19). Oklahoma, but recently opened to settlement, produces a large crop. Production in California is beginning to decline. Concentration and intense specialization in certain districts is evident. Minnesota and the Dakotas produce about 30 per cent of the Nation's crop of 658 million bushels. The Minnesota production is greater than that of the entire Nation in 1839, and the Dakota crop is greater than the Nation's crop of 1849.

*Wheat production, 1909.*—The great wheat belt of the Central West has shifted a little farther west upon the Great Plains (Fig. 20). Minnesota and western Iowa have declined somewhat and the crop of Oklahoma is short, but the crops of Kansas, Nebraska, and the Dakotas have more than doubled. There also has been a large increase in Montana, Idaho, and the eastern Oregon-Washington district. California continues to decline. In the East there is a notable increase in the production of western Illinois, but a decline in western Ohio.

*Wheat production, 1919.*—The full effect of the World War on wheat production was felt in this year (Fig. 21). The acreage harvested (73,099,421 acres) was 20 per cent greater than in any previous year. The production of 945 million bushels was larger than that of any previous year except 1915, the yield being reduced by unfavorable conditions, especially in June and July. Compared with 1909, the acreage increased 65 per cent, and the production about 40 per cent. Lessened production in the Dakotas and Minnesota was due to the very unfavorable season. In the Corn Belt, Kansas, Oklahoma, Texas, Colorado, and California, production increased very markedly. Kansas alone produced about 15 per cent of the total crop.

### Cropping Systems.

Wheat usually is grown in rotation with other crops, except in certain dry areas where it is alternated with summer fallow. Growing wheat continuously results in depleted fertility and poor physical condition of the soil, increased growth of weeds, accumulation of destructive plant diseases in the soil, and lowered yields of poorer quality. Cost of production also may be increased.

Local conditions determine the rotation and the crops used. A good system for sections having a humid climate should include a legume and a cultivated crop. Cultivation keeps weeds in check and has a beneficial effect upon the soil. Usually the land does not have to be plowed after a cultivated crop, thus reducing the cost of sowing wheat. Legumes add nitrogen and help to maintain the supply of humus. As a rule legumes and grasses are not used in rotations in the Great Plains and other dry-farmed areas because of the difficulty of growing them and of rotting them in the dry soil.

The areas where wheat is now grown in the United States, and the development of the wheat-growing industry in these areas, have been shown in the preceding maps. The relative importance of wheat in these areas and the cropping systems used on the farms where wheat is grown will now be considered. In Figure 22 the solid black spots indicate those areas where wheat occupied 80 per cent or more of the acreage of land in crops in 1919. Decreasing percentages are indicated by gradually lighter shadings.

The areas containing a high percentage of wheat (solid black in Fig. 22) are seen to be the same, in a general way, as the areas of large wheat production, shown by the dots in Figure 21. On careful study it is seen, however, that the percentage of wheat in the total of all crops is higher in certain areas, as, for instance, in Montana, than the frequency of dots in Figure 21 would lead one to expect. This is because few other crops are grown, on account of climatic or other limiting factors, leaving only wheat to occupy the land.

The choice made by farmers in different areas between the different small-grain crops is shown in Figure 23. The map shows the first and second choices in 1919, as indicated

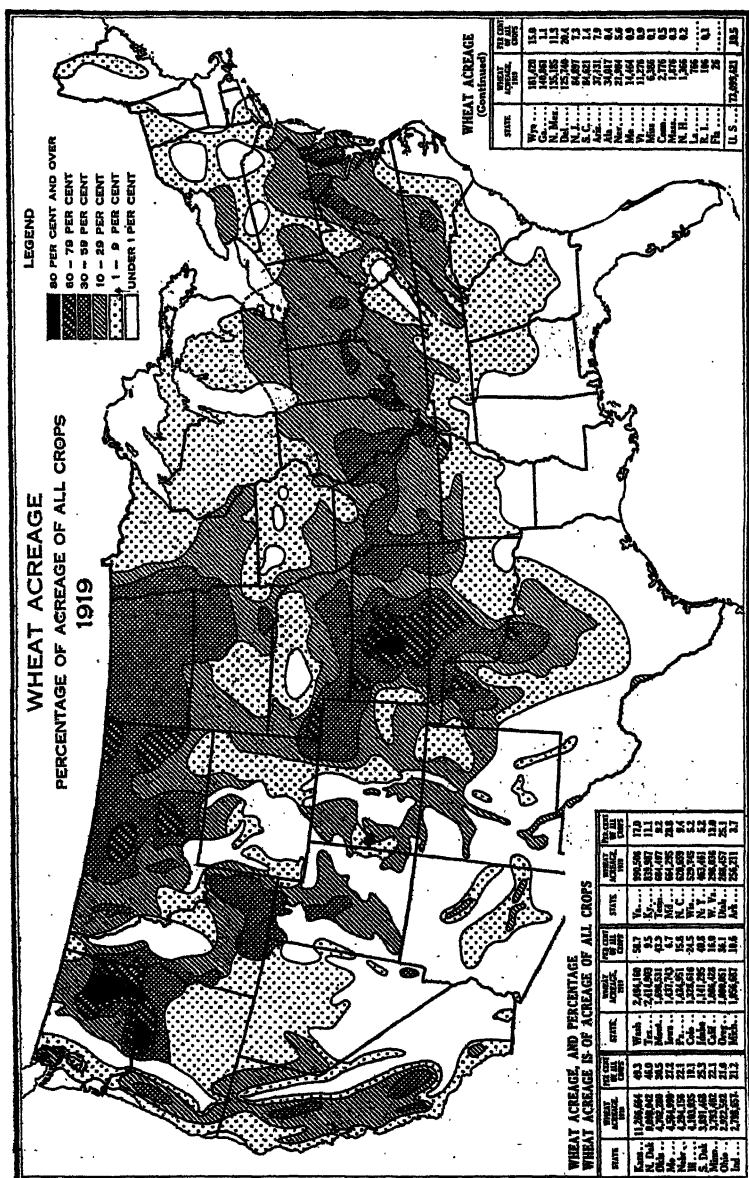


FIG. 22.—Wheat occupies 80 per cent or more of the crop land in parts of central western Kansas and eastern Oregon and Washington, and more than 60 per cent in larger portions of the same States and of Montana, Nebraska, Oklahoma, and Texas.

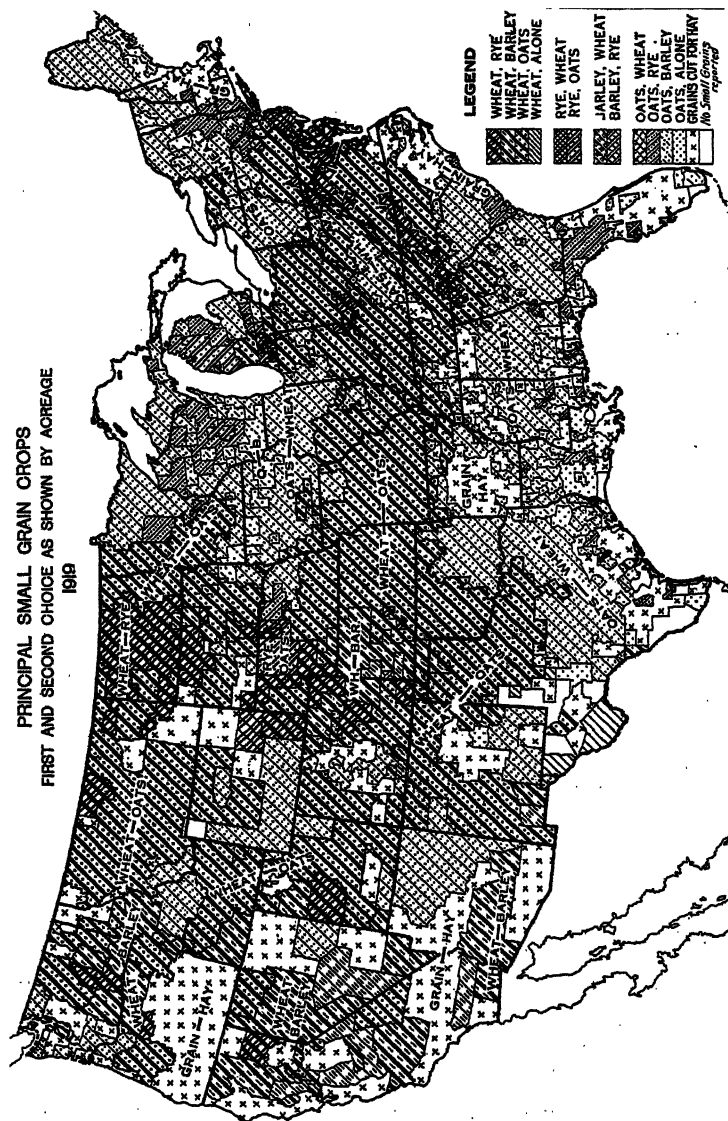


FIG. 23.—In most of the wheat-growing regions of the United States wheat leads in acreage with oats second. In the Dakotas and part of Montana rye stands second. Oats leads wheat in the South, in New England, in the northern Corn Belt, and under irrigation in some parts of the Rocky Mountain region.



by the acreage of the two most important small-grain crops. The crop with the largest acreage in any area is named first, followed by the crop next in importance. The choice of crops thus shown is the result of the interaction of all the various climatic, biologic, and economic factors affecting production on the farm. Some of these factors will now be discussed more fully.

The effect of climate on the distribution of different crops, and different kinds or classes of each crop, is very important. The distribution of winter wheat and spring wheat, for example, is shown in Figures 24 and 25. Winter wheat is grown south of the spring wheat area, except in certain areas where either type may be grown. Winter wheat almost always is preferred where winter conditions permit it to be grown, as it usually gives a higher yield and does not compete so much with spring-sown crops for labor as does spring wheat. In a locality growing both types the winter wheat is ready to harvest earlier than is spring wheat, thus extending the harvest season and allowing a better utilization of labor.

The different characteristics of different crops enable the farmer to utilize his labor to the best advantage and avoid the employment of much extra labor. In the spring-wheat belt, for instance, wheat is sown first in the spring, early sowing being very advantageous to this crop. After wheat comes the seeding of oats and barley, and in some localities, flax or corn. The harvest of barley comes first, followed by that of wheat and oats. Rye finds a place in the agriculture of the spring-wheat belt when prices are attractive. This crop, being fall-sown, gives a better distribution of labor than with spring-sown crops alone.

Not only does the adaptation of crops to different areas determine what ones are grown in any particular place, but among the adapted crops their relative profitableness is a factor of importance. The principal crops competing with spring wheat are oats (Fig. 26), barley (Fig. 27), and, to some extent, winter rye (Fig. 28) and corn (Fig. 29), while those competing with winter wheat are principally oats and corn. Oats can be grown over all the area where wheat is adapted, barley over the area suited to spring wheat, and corn over a large part of the winter-wheat area and a small part of the spring-wheat area. (See Figs. 30, 31, and 32.)

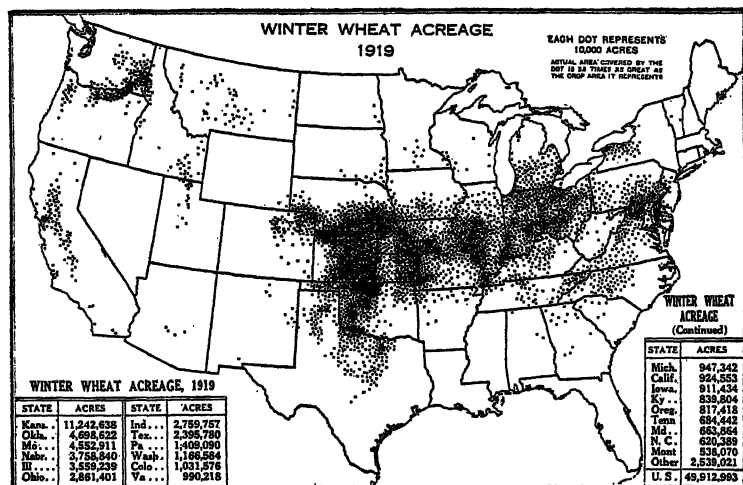


FIG. 24.—Nearly all of the winter wheat is grown between latitude 35 and latitude 41, except in the Pacific Northwest, where the climate is milder. The northern frontier of winter wheat follows in a general way the mean winter temperature line of 20° F., which extends in a northwesterly direction from southern Wisconsin and northern Iowa diagonally across South Dakota and Montana.

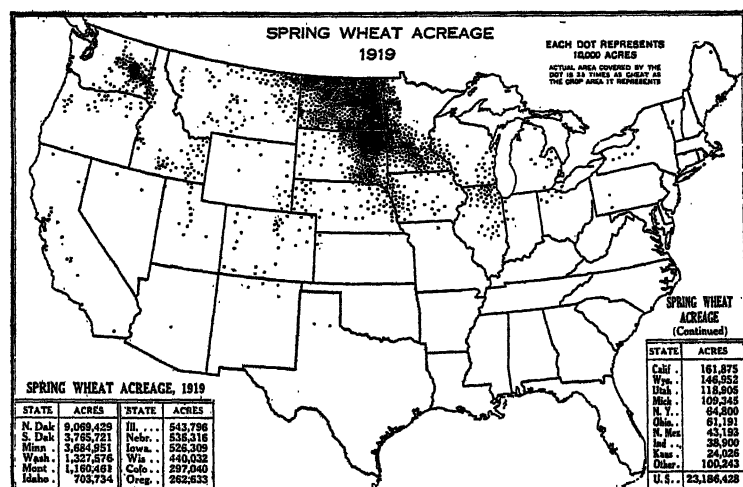


FIG. 25.—Practically all of the spring wheat is grown from latitude 43 northward, the boundary of the area crossing our boundary at latitude 49 and extending far into Canada. Spring wheat lies north of corn and winter wheat. The northern limit of spring wheat is approximately the mean summer temperature of 58° F., which is found in the United States only in the western mountains.

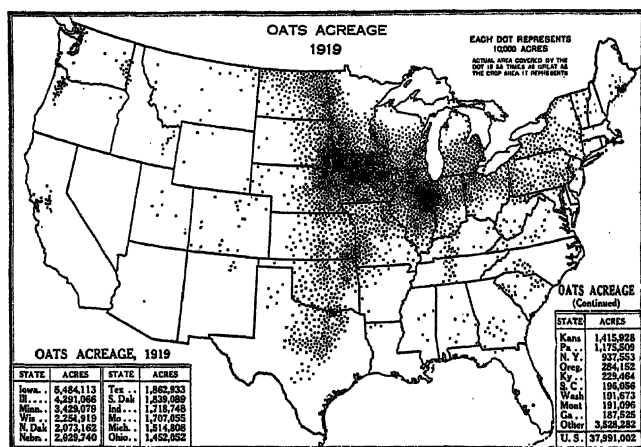


FIG. 26.—The oat crop is less subject to disease than wheat and can be grown under a wider range of environing conditions. Winter varieties are grown only in the South. Spring oats on wheat farms permit better distribution of labor in seeding and harvest. Concentrated production is adjacent to great central markets and between the winter and spring wheat belts.

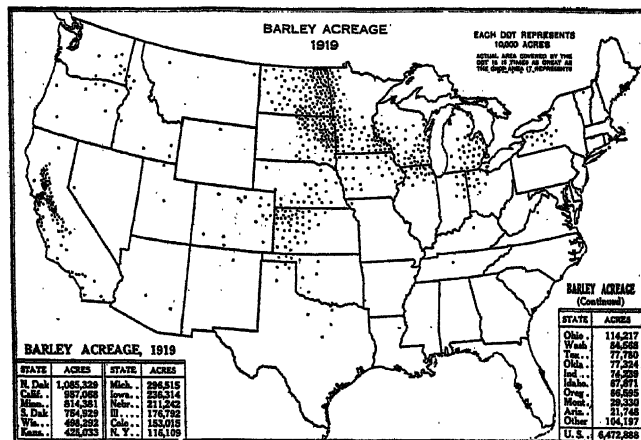


FIG. 27.—Spring barley is well adapted in the spring-wheat belt. It can be sown later and harvested earlier than spring wheat or oats and provides feed grain for stock. A little winter barley is grown in the South.

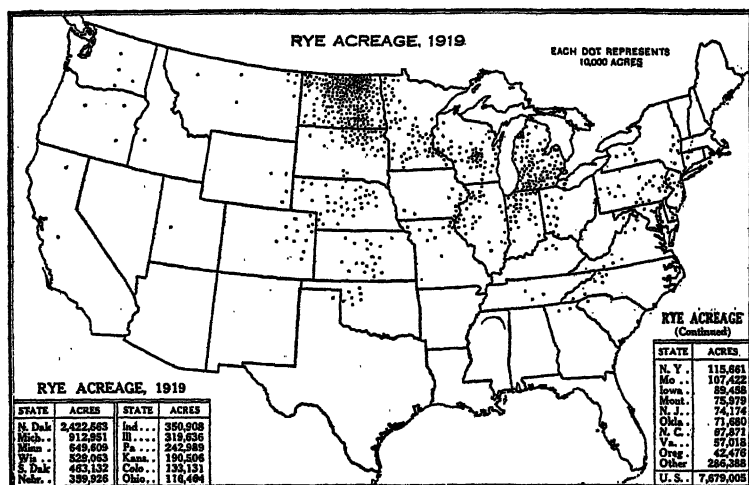


FIG. 28.—Rye is practically all fall sown. It competes successfully with winter wheat on poor soils, and with spring wheat because it permits a better distribution of labor throughout the year. This explains its extensive production in North Dakota, where spring wheat is the dominant crop, and winter wheat can not be grown.

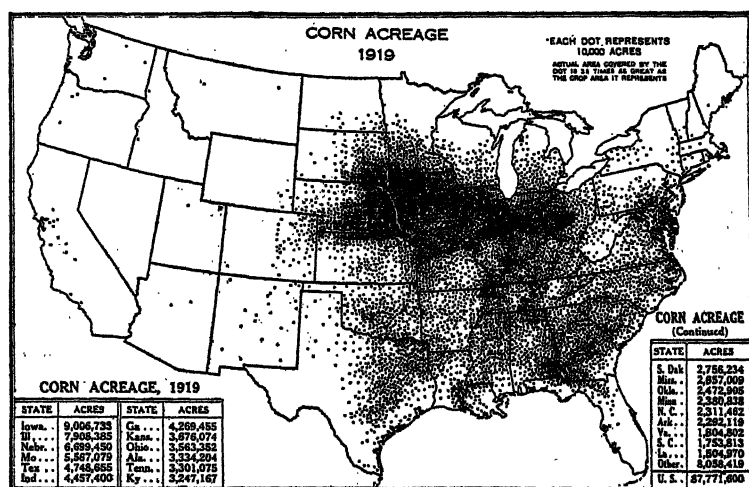


FIG. 29.—Corn is widely grown under warm humid and semiarid conditions. Concentrated production in the corn belt is the basis of hog and cattle feeding. As a late-sown tilled crop, wherever grown, it enables weed control, better rotations, diversified farming, including stock raising, and better seasonal labor distribution. It also is the dominant silage crop for dairy and beef production.

### Organization for Profitable Production.

Most of the wheat farming in this country lies between the Corn Belt and the ranching regions of the West. The reactions which occur between these general classes of farming lead many observers to look upon corn farming as encroaching upon wheat farming and to look upon wheat farming as encroaching on the ranching area. The relative profitableness of the different crops which are grown in any given place at any given time is influenced by a wide range of conditions.

The present yields of wheat in Iowa, for instance, are good. If wheat paid better than corn under conditions such as prevail in Iowa (Fig. 30), farmers there would center their business on wheat rather than on corn as at present. Much of the world, however, is well suited to wheat production, while relatively only a small part of it is well suited to corn production. It hardly can be expected, therefore, that the price of wheat through any considerable period of time will remain so high in relation to the price of corn as to make wheat a more profitable crop than corn under the best of Corn Belt conditions.

#### CHANGES IN THE CHOICE OF CROPS AS SHOWN BY ACREAGE HARDIN COUNTY, IOWA 1862-1920

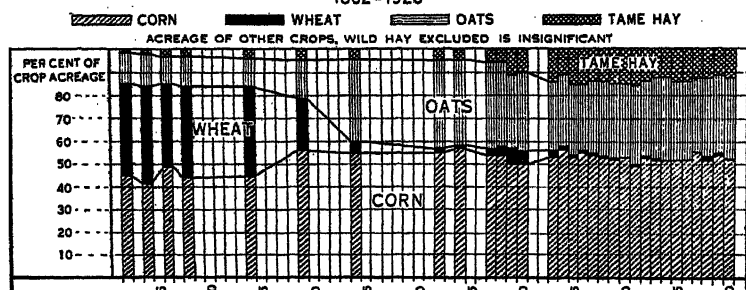


FIG. 30.—In the 10 years from 1875 to 1885 wheat nearly disappeared from Hardin County, Iowa, being replaced chiefly by oats, which in turn was partly replaced by hay as dairying increased. Wheat and oats are much alike in their requirements throughout the season, and competition between them usually is strong. In the past 40 years the purchasing power of oats, in terms of wheat, has increased rather steadily in Iowa. This change in relative prices, carrying weight in a complex of factors, helped oats to supplant wheat.

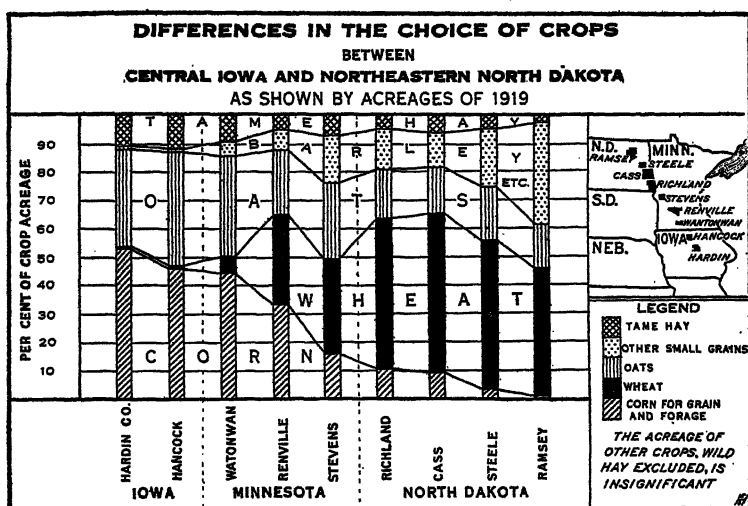


FIG. 31.—In a cross section of the spring-wheat belt, northwestward from north central Iowa to northeastern North Dakota, the proportion of wheat rapidly increases, largely replacing corn, which almost vanishes because of increasing climatic handicaps. The proportion of oats and tame hay slowly decreases, and the proportion of other small grain, principally barley and flax, increases.

There are many other factors which govern the proportionate acreage of different crops in any given section (Figs. 31 and 32). One of the most important factors is the economical distribution of labor on the farm throughout the year. In considering competition between crops for land, therefore, we must not overlook the fact that the farmer in adjusting his business weighs the different possible uses and requirements of labor (man labor) and equipment (horses, cattle, machinery, fences, etc.) with the different possible uses and requirements of land. Thus, even though he is situated where wheat is the one single crop which pays best, he is not likely to grow wheat alone, because usually the profitableness of the farm as a whole will be increased by producing some other crop for sale or for home use.

He gives a share to corn or to some other tilled crop, partly because rotation with a tilled crop is desirable to clean the land of weeds and partly because it utilizes labor and equipment to better advantage in handling the crops and also favors live-stock production. Likewise he gives a share to other cereals or to hay crops, which can be grown,

harvested, fed, and marketed, for the most part, without seriously interfering with giving attention to wheat, and a share to native or to tame pasture for live stock which will utilize hay and other feeds during the winter.

Just as farmers in a wheat area usually can gain by allotting a share of wheat land to crops that will give a return on

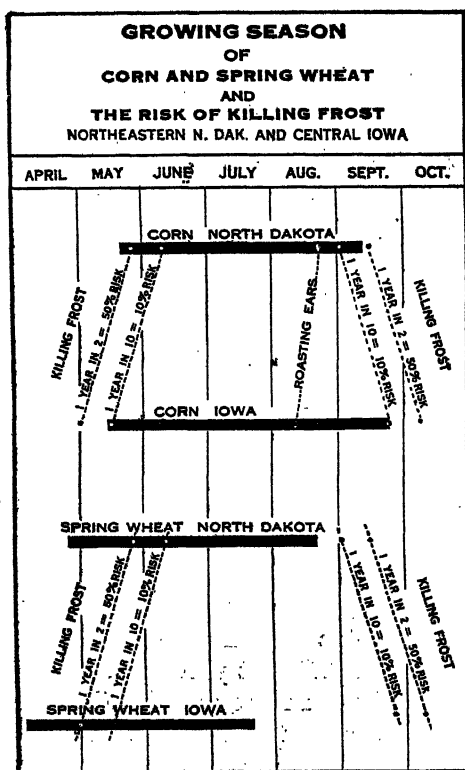


FIG. 32.—Northward from central Iowa to northeastern North Dakota early fall frosts become a greater and greater handicap to corn but not to wheat, and they are the largest single factor in decreasing corn acreage.

or in several years. Regardless of how important or how unimportant wheat may be in his business, his aim is to press it at the expense of other things only so far as he believes it will pay best.

labor and equipment at times when wheat is not demanding attention, so farmers in the Corn Belt usually can gain by allotting a share of corn land to small grain, hay, and pasture which will give a return on labor and equipment at times when corn is not demanding attention (Figs. 30, 31, and 32).

So, whether the farmer is choosing wheat as a main crop or as a subordinate crop, he chooses it on the basis of how profitable it is in relation to other crops, from the standpoint of the use of labor and equipment as well as land, in one year

## Natural Factors Influencing Production.

The production of wheat in any year is the result of the interaction of many factors in nature, some favorable, others unfavorable. The most important of these are the climatic conditions. Too much or too little moisture, and the occurrence of frost and freezing temperatures, hail, hot winds, and storms take their toll from the wheat crop. Fungous diseases and insects and animal pests exact further tribute.

*Moisture.*—The dependence of the wheat crop on precipitation, that is, on rain and snow, is realized when it is remembered that the great wheat-producing areas of the country

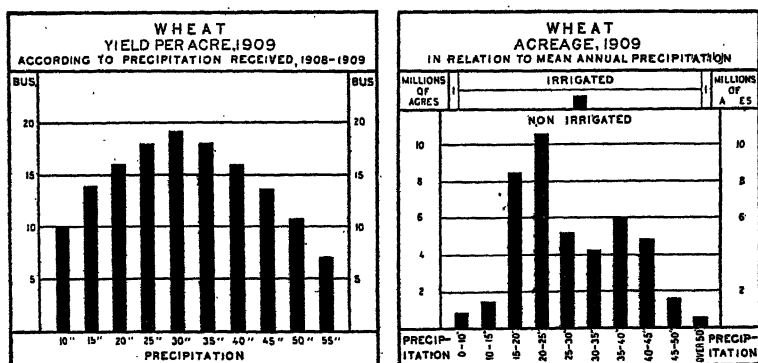


FIG. 33.—In 1909 wheat yields increased with precipitation since the previous crop, until 30 inches had been received, after which there was a gradual decrease in acre yield with increasing rainfall. In the same year nearly one-half of the wheat acreage was in areas having a mean annual precipitation of 15 to 25 inches.

are in the drier portions. In 1909 it was determined (Fig. 33) that over 60 per cent of the wheat acreage and production of the United States was in regions (nonirrigated) having less than 30 inches of annual precipitation. It also was determined that largest yields were harvested in that year in regions where the precipitation was 30 to 35 inches, with lower yields where precipitation was either more or less. The size of the wheat crop, then, must depend every year to a very large extent on the precipitation, as usually this is the limiting factor.

Fortunately, not all parts of the country are liable to extensive damage in any one year. Dry weather often is



prevalent over large areas, but it has never been sufficiently widespread to reduce the wheat production of the country as a whole to conditions of famine, as was the experience in Russia in 1921.

*Winter-killing.*—Some of the winter wheat acreage sown in the fall always is abandoned the next spring. This is due to several unfavorable weather conditions during fall and winter, such as fall drought, intense cold, winter drought, soil blowing, ice sheets, etc., collectively known as winterkilling. The percentage of the acreage sown that was abandoned in the different years from 1900 to 1921, inclusive, is shown in Figure 34. The largest abandonment was 31 per cent in 1917, after very unfavorable winter conditions, and the smallest was 1.1 per cent in 1919. The average for this period is about 10 per cent.

*Insects.*—Severe losses of wheat are caused each year by insects. Most important of these are Hessian fly, chinch bug, joint worm, grasshopper, and green bug. The average losses due to these pests have been estimated at more than 2 per cent of the crop, or nearly 18 million bushels each year. The Hessian fly is responsible for more than half of this loss.

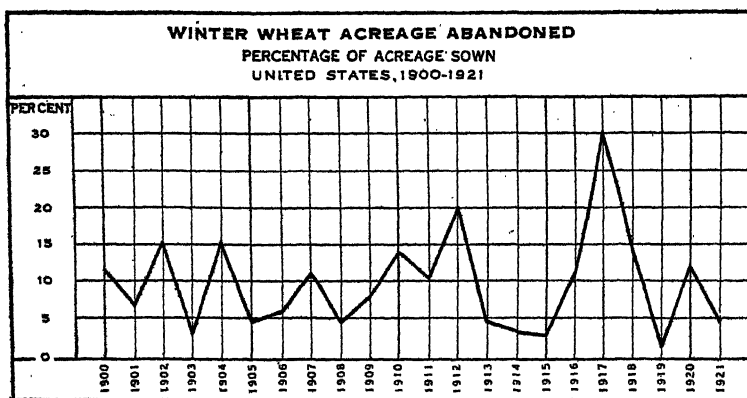


FIG. 34.—Every spring a considerable acreage of winter wheat sown in the previous autumn is abandoned because of winter injury from various causes. The average abandonment is about 10 per cent, but occasionally it is much larger, rising to 20 per cent in 1912 and 31 per cent in 1917.

The area infested by the Hessian fly is shown in Figure 35, together with best dates for seeding wheat to escape injury.

Chinch bugs are very destructive in some years in the central part of the country, and farmers often are put to great expense in fighting them. The joint worm is a serious pest, principally in the States north of the Ohio River.

Grasshoppers, in the spring-wheat area and in Kansas, sometimes are very destructive, especially in dry years. In Texas, Oklahoma, and Kansas the green bug occurs in destructive numbers in certain favorable years and causes considerable losses, but, on the average, such losses are not more than 5 per cent of those caused by Hessian fly.



FIG. 35.—In the area infested by Hessian fly, wheat seeding must be delayed until the adult flies have died or severe injury may result. This fly-free date may be later than the most favorable date for seeding wheat from other viewpoints.

*Fungous diseases.*—Wheat is subject to many fungous diseases, chief among which are stem rust, leaf rust, stripe rust, bunt or stinking smut, loose smut, and scab. Of these, stem rust, bunt, and scab are of greatest economic importance and are widely distributed throughout the chief wheat-producing areas. Estimates of losses, in bushels, caused by these three diseases, made in the four years from 1918 to 1921, inclusive, are as follows:

| Disease.       | 1918            | 1919            | 1920            | 1921            |
|----------------|-----------------|-----------------|-----------------|-----------------|
|                | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> |
| Stem rust..... | 804,000         | 71,417,000      | 54,908,000      | 22,800,000      |
| Bunt.....      | 19,083,000      | 10,219,000      | 14,088,000      | 10,500,000      |
| Scab.....      | 3,936,000       | 59,680,000      | 11,724,000      | 10,000,000      |
| Total.....     | 23,803,000      | 141,316,000     | 80,715,000      | 43,300,000      |

In severe epidemics the losses caused by stem rust alone sometimes amount to more than those caused by all other diseases combined. In 1916, this rust destroyed approximately 180,000,000 bushels of hard red spring wheat in the United States and about 100,000,000 bushels in the Prairie Provinces of Canada. In Denmark, stem rust has been effectively controlled by eradicating the common barberry, which carries one stage of this rust. The United States Department of Agriculture and 13 North-central States are now cooperating in a campaign to eradicate this barberry in those States.

Of these three diseases, bunt is the only one that can be controlled by seed treatment. Formaldehyde and copper sulphate (blue vitriol) are now widely used for the prevention of bunt. In the Pacific Coast States, where so much injury has been caused by formaldehyde, the blue vitriol-lime method is used, the seed being dipped in milk of lime immediately after treatment.

Scab is a widely distributed disease of wheat, which frequently attacks barley and rye also. It is particularly abundant in the Corn Belt. It is caused by the same fungus (*Gibberella saubineti*) that causes much of the root, stalk, and ear rot in corn. This disease usually is more destructive in sections where wheat follows corn in the rotation. Effective methods for the control of scab have not yet been discovered.

## Cost of Production.

The farmer is concerned first of all with the efficient production of crops and live stock. This purpose may most readily be attained by studying the production costs of the various crop and live-stock enterprises which make up his farm business. A knowledge of the separate factors which make up the total cost of farm enterprises is necessary in order to know where and to what extent efficiency in production may be introduced. Knowing the relative costs and profits of the several farm enterprises, the farmer is in position to select the most profitable ones, thereby increasing the total net profits of the farm. A study of production costs, in addition to supplying information for the introduction of more efficient methods and for the basis of enterprise selection, also serves the useful purpose of comparing the production cost with market prices, such comparisons being necessary if the farmer is to be alert in adjusting the supply to the demands of the market. Areas in which studies have been made are shown in Figure 36.

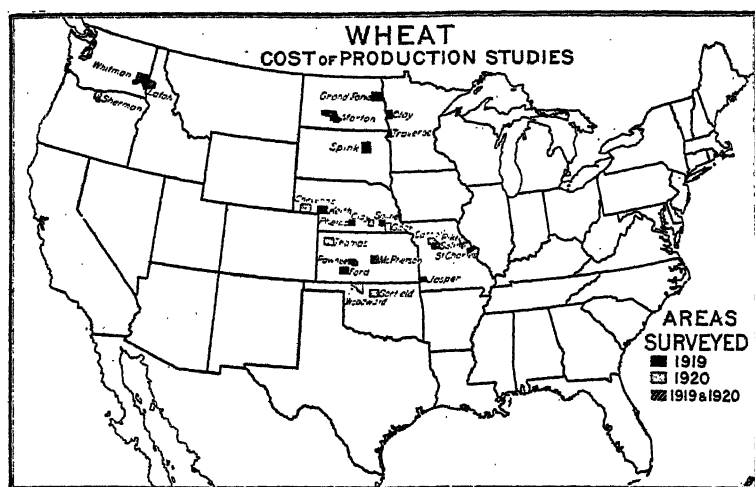


FIG. 36.—Studies of the cost of producing wheat on representative farms were made by the Office of Farm Management and Farm Economics for the crops of 1919 and 1920 in the counties shown on this map. The results of the study of the 1919 crop are used as a basis for this discussion. For complete report see Department Bulletin 942. Write the department for results of 1920 study.

## Variations in Cost of Production.

There are very few farms on which wheat is produced where the conditions are exactly alike throughout. The different possible combinations of variable factors are almost infinite in number, and there is a wide range in the cost per acre and the cost per bushel (Fig. 37). This means that whatever figure is decided upon as "the cost of producing wheat," most of the farms produce at some other figure, some below and some above. No further argument than the great variety of different costs on different farms should be required to prove that the price of wheat is not influenced by the cost of producing wheat, except in a remote way and only as the result of a series of adjustments. The farmers' interest, therefore, is in the *cost of production for his farm*, its relation to the market price offered to *him*, the interrelations of the several factors of cost *on his farm*, whether he can afford to produce wheat at the probable price, and how and where *he* can cut *his* expenses or increase *his* returns.

The actual figure determined upon, to represent the average cost of production, is of use, in *connection with other statistics*, for guiding judgment as to production and marketing, adjustments being indicated to producers and to consumers through price. If the supply is large the price will be low, and producers will tend to produce less wheat the next year. Any call for more wheat must be made with a promise of a higher price. The actual cost figure arrived at is not so important, either to consumer or producer, as the measurement of the conditions which determine the figure and an understanding of the trend of changes in cost factors and in prices, and their effect, combined, upon production.

It obviously is impossible for any agency to determine the cost of producing wheat for every farm on which wheat is produced. It is quite possible, however, to study the cost of producing wheat on a number of representative farms in important producing sections where different conditions prevail, with confidence that the data so obtained will approximate very closely the results which a study of every farm would reveal. Sufficient variations of conditions are brought to attention in this way to enable each producer to estimate his own cost of production with a minimum of

effort by the very simple process of comparing notes on his own farm operations with those of the tables and charts published in reports.

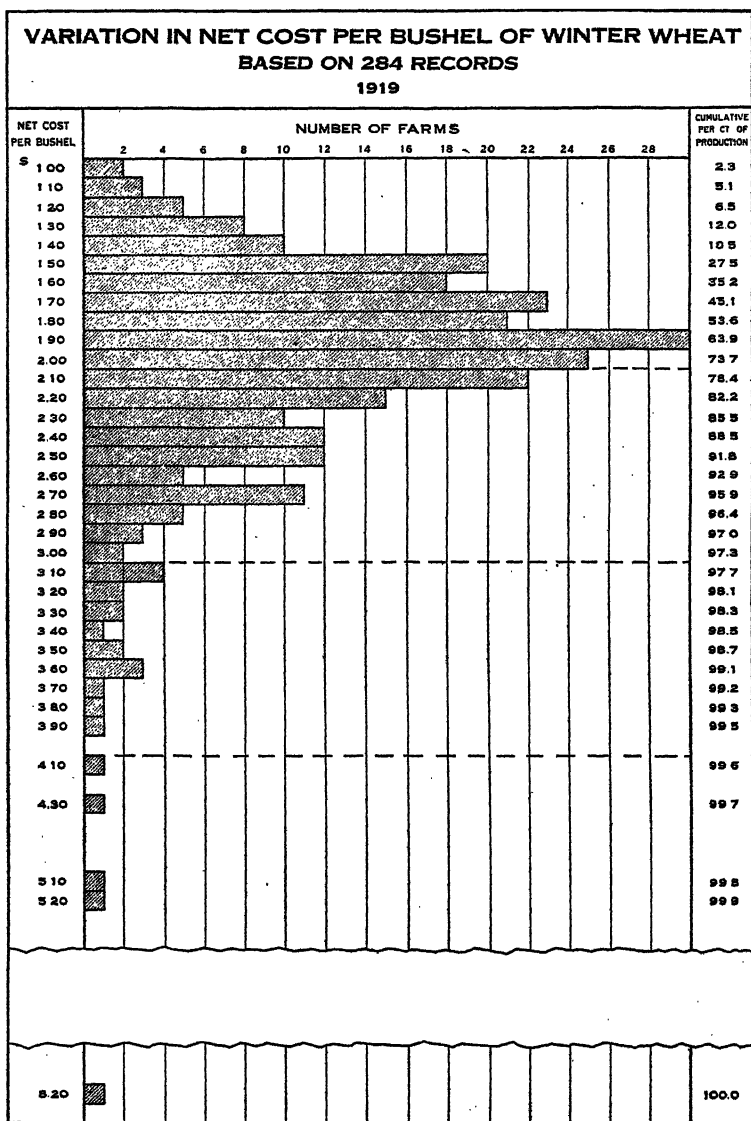


FIG. 37.—Note the wide variation in the net cost per bushel in 1919. The average cost per bushel on these 284 farms was \$1.87. About three-fourths of the farmers of whom records were taken produced wheat at a cost of \$2 and less.

## Regional Variation in Cost of Production.

Next to the wide variation in net cost per bushel, the outstanding fact is that high cost per acre does not necessarily mean high cost per bushel. In fact if we know only the cost per acre we know very little about the cost of a bushel of wheat. This fact is illustrated graphically in Figure 38. The average cost per acre of producing winter wheat in Saline County, Nebr., was just twice as high in 1919 as the cost of growing an acre of spring wheat in Morton County, N. Dak., but the net cost per bushel of the winter wheat in Saline County, Nebr., was only 6 cents more than half the cost of a bushel of the spring wheat in Morton County. Similar differences, even though not so marked, may be observed in acre and bushel costs of other areas.

The dominant factor is acre yield. The average yield of spring wheat in Morton County, N. Dak., in 1919 was 4.4 bushels per acre, while in Saline County, Nebr., the yield of winter wheat was 18.1 bushels per acre. Neighboring farms with about the same cost per acre may show very

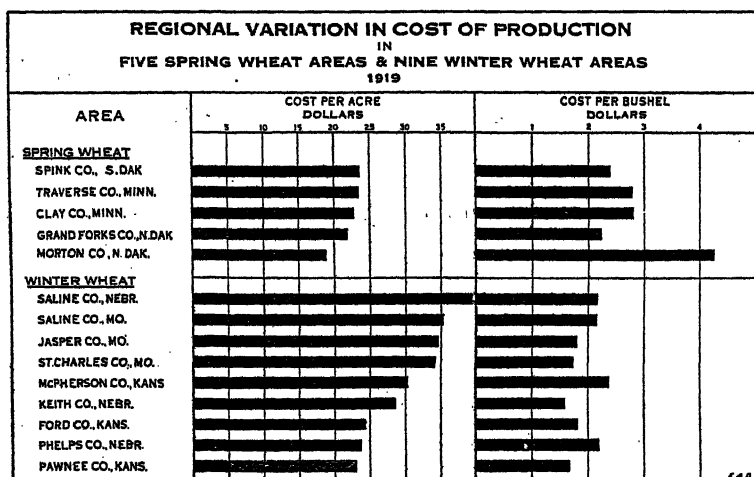


FIG. 38.—Note low cost per acre but high cost per bushel in Morton County, N. Dak., and high cost per acre but low cost per bushel in Saline County, Nebr. Yield per acre is an important factor in cost per bushel.

different costs per bushel. Take for instance two farms in Morton County, N. Dak., each harvesting 100 acres of spring wheat, and by no means extreme cases for the season. On one of these farms with a yield of 5 bushels per acre, the acre cost was \$21.31, and the bushel cost \$4.30. On the other farm with a yield of 2.9 bushels and a lower acre cost of \$19.97, the cost per bushel was \$6.79.

#### Regional Variation in Cost Factors.

As products are sold by the unit, every effort must be made to cut the cost of the unit to the lowest possible figure, irrespective of the acre costs. In the case of wheat, it is particularly necessary to control the unit costs because yield is so much a matter of seasonal variation. All that can be done toward making ends meet is to cut the acre costs to a figure such that over a period of years the returns will be favorable. To do this, one must know from experience what yield one may expect from one's own farm, and keep the acre cost within the figure which, divided by the yield, will give a bushel cost below the selling price. This is much easier said than done, it is true, but with careful attention to the details of sound management, much can be done to reduce the risk of loss and to increase the chances of profit.

The average cost per acre, distributed into six classes of expense, as noted for the 1919 crop, is shown by counties in Figure 39, arranged in descending order of total cost per acre for the five spring wheat areas and for the nine winter wheat areas. The length of the bars is proportional to the average cost for all the farms in each area. The numbers in the columns to the left of the bars show the number of hours of labor used per acre on those farms using horses only; 121 farms using tractors or motor trucks were omitted in figuring the hours of man and horse labor used.

There is wide variation in the amount of labor required per acre, both as between areas and as between different farms in the same area, and some difference in the cost per hour. In the spring-wheat areas the largest number of farms required from 6 to 10 hours of man labor and from



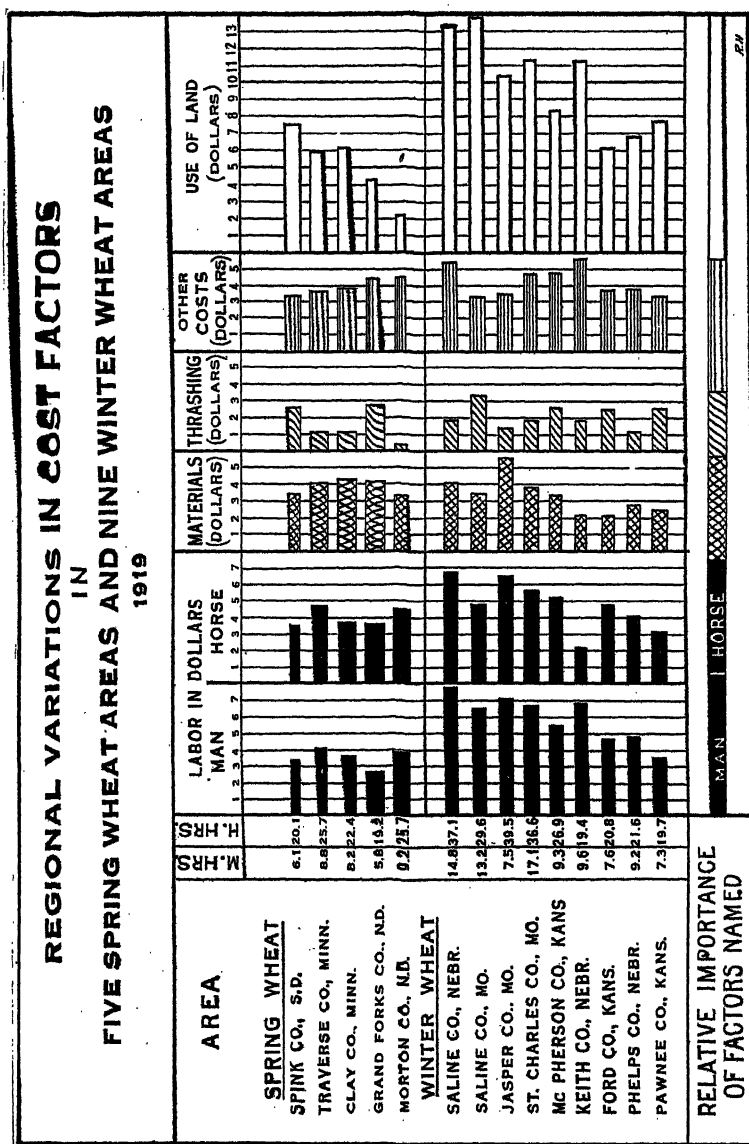


FIG. 39.—The counties in each group are arranged in descending order of total costs per acre. Note the wide variation in the costs of the several factors. For example, the average cost of man labor on an acre in 1919 varied from \$2.50 in Grand Forks County, N. Dak., to over \$7.50 in Saline County, Nebr.

20 to 26 hours of horse labor. The cost per hour was 35 cents for man labor and 20 for horse labor, except during the harvesting and marketing season, when a rate of 60 cents an hour for man labor prevailed. The lowest labor requirements were 3.6 man hours and 13.4 horse hours on one farm. The highest was 19.1 man hours and 45.8 horse hours, also on one farm.

In the winter-wheat areas seven farmers produced the crop with 5.4 hours of man labor and 15.9 horse hours. On the other end of the scale two farms with a small acreage spent 27.4 man hours and 61.6 horse hours on the acre. Two thirds of the acreage was worked with 10 hours or less of man labor and an average of less than 23 horse hours. The prevailing rates for man labor were from 25 to 35 cents an hour for seed-bed preparation and seeding and 60 to 80 cents for harvesting and marketing. Horse labor cost from 18 cents an hour in Missouri to 25 cents in Ford County, Kans. Together man and horse labor made up nearly 35 per cent of the total cost per acre.

Under the general head "materials" are included seed, twine, manure and straw, green manure, commercial fertilizer, and poison for grasshopper control. Of these, seed cost was most important, at \$3.21 for spring wheat and \$2.18 for winter wheat. The use of the other items was not general, except binder twine in three spring-wheat and four winter-wheat areas, where all wheat was cut with a binder at an average cost of 51 and 68 cents, respectively. The use of commercial fertilizer was confined almost exclusively to Jasper County, Mo., where it averaged about \$2 per acre.

The thrashing cost was variable, depending on the proportion in which the thrashing crew was furnished by the farmer or the thrasher, and somewhat, of course, on the yield. The cost per acre for thrashing spring wheat was 52 cents less, but 4 cents a bushel more, than for thrashing winter wheat.

The "other costs" include taxes and insurance, use-cost of tractor, use-cost of other farm machinery, loss on abandoned wheat acreage, sack rent, and general expense. The last mentioned was found to be about 12 per cent of the combined cost for labor materials and thrashing. Tractor and machinery use-cost varied, but averaged \$1.77 for spring

wheat and \$1.86 for winter wheat acreage. Taxes varied from 25 to 95 cents an acre. Small credits for pasture were found in the winter wheat areas and deducted from the total of "other costs."

Use of land was the largest single item of cost in all areas except Morton County, N. Dak. It is determined for cash-rented farms by the rent per acre, for share-rented farms by the quantity of wheat given as rent times the selling price per bushel, and for owned farms by the valuation of the land times the interest rate on first mortgages. The lowest use-cost of land observed was \$1.25 an acre cash rent in Morton County, N. Dak. The value of owned wheat land in that county averaged \$36. The highest use-of-land cost noted was \$20.26 on a farm in St. Charles County, Mo., rented for a 2/5 share. The highest average value of owned wheat land was \$241 in Saline County, Mo.

#### The Trend of Costs and Wheat Prices.

The 1919 crop was produced at a high level of cost. All the items of cost had been increasing for several years (Fig. 40). The price of wheat also had risen at the same time and in somewhat greater proportion. The 1920 crop was grown at costs even higher than for the 1919 crop, but, before the 1920 crop could be disposed of, the price of wheat fell sharply, greatly reducing the returns.

For the 1921 crop, wages were somewhat lower, because, with the falling price of farm products, farmers were unwilling to pay the wages of the preceding five years. The prices of things farmers buy slacked off a little, but much less than the price of wheat. Land values, which had increased constantly, did not fall off much, and freight rates remained very high. The prospect for the 1922 crop is not particularly promising with respect to price. It is particularly necessary at this time for wheat farmers to grow the crop with small cash outlay, so that they may get for their own work all there is in the crop.

#### Method of Estimating Cost of Production Illustrated.

Each farmer, in his own interest, should forecast his costs and returns, and plan accordingly. Then he should observe as he works how closely he can come to his plan; or

finding changes of operation advisable or forced on him, he will know at once how and how much the final results will be affected. At the end of the season he has a record of fact to compare with his forecast. Nobody can tell him more about the facts for his farm than he can have immediately available at any time with the very small amount of additional effort required to make definite observations, and preserve them in writing for reference and for use in making estimates and checking results. Farmers will find that careful estimating from *definite facts of their own*, in addition to whatever help they may get from statistics generally available, is of practical service in forming decisions leading to greater returns.

For convenience of those not in the habit of figuring costs, the following form is offered, using the figures for

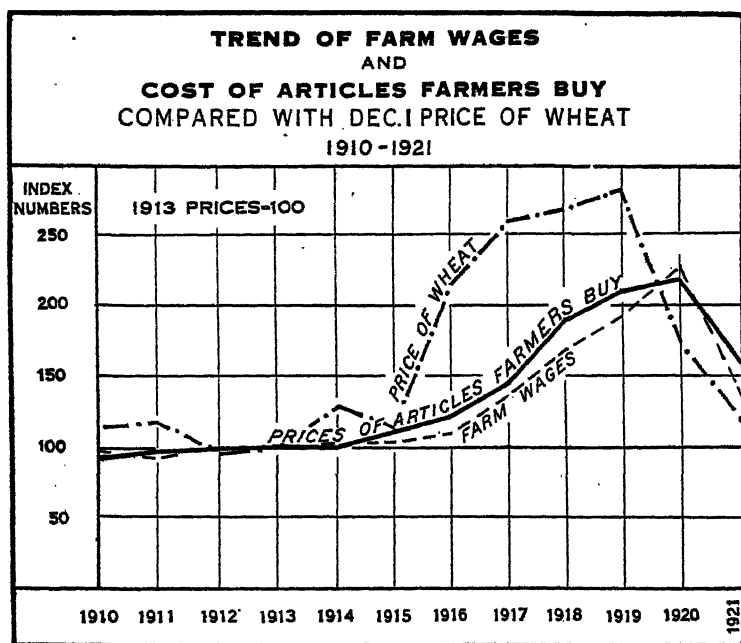


FIG. 40.—The course of prices and wages in the period 1910 to 1921 is shown in relative terms, using the prices and wages of 1913 as 100. Prices of articles farmers buy rose less rapidly than the price of wheat, but when the price of wheat fell sharply and greatly in 1920, farm wages and the prices of things farmers buy remained high, and have not yet fallen in line with the price of wheat.

120 *Yearbook of the Department of Agriculture, 1921.*

the average farm in McPherson County, Kans., in 1919. Each farmer, of course, must use the cost rates he has determined for his own farm.

*Examples for figuring costs per acre and per bushel.*

| Item of cost.  | Average crop of 1919,<br>McPherson County,<br>Kans. |        |        | Your farm, 1921. |        |       | Your farm, 1922. |        |       |
|--|---|--------|--------|------------------|--------|-------|------------------|--------|-------|
|  | Amount.   | Price. | Cost.  | Amount.          | Price. | Cost. | Amount.          | Price. | Cost. |
| Acres of wheat per farm.....   | 133 a   | .....  | .....  | .....            | .....  | ..... | .....            | .....  | ..... |
| Production per farm.....   | 1,687 bu.   | .....  | .....  | .....            | .....  | ..... | .....            | .....  | ..... |
| Yield of wheat per acre.....   | 12.7 bu.  | .....  | .....  | .....            | .....  | ..... | .....            | .....  | ..... |
| Operating costs per acre:  |   |        |        |                  |        |       |                  |        |       |
| Preparation and seeding—   |   |        |        |                  |        |       |                  |        |       |
| Man labor.....   | 4.5 hrs.  | \$0.36 | \$1.62 | .....            | .....  | ..... | .....            | .....  | ..... |
| Horse labor.....   | 18.8 hrs.   | .19    | 3.58   | .....            | .....  | ..... | .....            | .....  | ..... |
| Harvesting and market-<br>ing—   |   |        |        |                  |        |       |                  |        |       |
| Man labor.....   | 4.8 hrs.  | .80    | 3.89   | .....            | .....  | ..... | .....            | .....  | ..... |
| Horse labor.....   | 8.1 hrs.  | .20    | 1.61   | .....            | .....  | ..... | .....            | .....  | ..... |
| Seed.....  | 1.19 bu.  | 1.98   | 2.36   | .....            | .....  | ..... | .....            | .....  | ..... |
| Binder twine.....  | 2.8 lbs.  | .23    | .63    | .....            | .....  | ..... | .....            | .....  | ..... |
| Thrashing ( $\frac{3}{4}$ shock<br>thrashed).....  | 12.7 bu.  | .23    | 2.83   | .....            | .....  | ..... | .....            | .....  | ..... |
| Total of above cost<br>items (76 per cent of<br>total operating cost) <sup>1</sup> ..... |   |        | 16.52  | .....            | .....  | ..... | .....            | .....  | ..... |
| Other operating costs (24<br>per cent).....  |   |        | 5.24   | .....            | .....  | ..... | .....            | .....  | ..... |
| Total operating cost per<br>acre.....  |   |        | 21.76  | .....            | .....  | ..... | .....            | .....  | ..... |
| Operating cost per bushel<br>(\$21.76 ÷ yield 12.7 bushels).....                         |   |        | 1.71   | .....            | .....  | ..... | .....            | .....  | ..... |
| Rent, or current interest on<br>fair valuation of land.....                              |   |        | 8.44   | .....            | .....  | ..... | .....            | .....  | ..... |
| Cost per acre, including land.....   |   |        | 30.20  | .....            | .....  | ..... | .....            | .....  | ..... |
| Cost per bushel, including<br>land (\$30.20 ÷ 12.7).....                                 |   |        | 2.38   | .....            | .....  | ..... | .....            | .....  | ..... |

<sup>1</sup> These costs may not hold exactly at 76 per cent for individual farms showing wide variations in the size of the sum of items listed nor for those with unusually high or low other miscellaneous costs.

### Financing Wheat Production.

To a very considerable extent, indeed to a far greater degree than in most other industries, the financing of the wheat crop is done with the farmers' own capital. The credit

sought and obtained in most cases is only supplementary to the capital invested by the farmer himself. The wheat grower may need production credit, which will enable him to prepare his soil, procure suitable seed, maintain his family and live stock during the crop-growing season, and to employ help in reaping and thrashing his grain. All of this credit will not be needed, of course, for the entire production period, but must be available for use when needed in carrying out the farm program. Its term, therefore, may vary from a few days to six months, and it is needed longer in case prices at thrashing time are so low that holding the wheat seems desirable.

An inquiry from banks, conducted by the department some months ago, indicated that in Kansas, a typical winter-wheat State, 45 per cent of the loans to farmers were made on their personal notes, without indorsement; 13 per cent on notes with one or more indorsements; 29 per cent on live-stock mortgages; 10 per cent on crop liens; and the remaining 3 per cent on warehouse receipts, stocks and bonds, and miscellaneous security. In North Dakota, a typical spring-wheat State, the same inquiry indicated that 27 per cent of the farmers' loans were obtained on notes without indorsement, 9 per cent on notes with indorsement, 43 per cent on live-stock mortgages, 12 per cent on crop liens, and the remaining 9 per cent on warehouse receipts, stocks and bonds, and other forms of security.

Doubtless the crop to be produced should constitute the leading security for a loan obtained to assist in its production, as in effect the money is invested in the crop. Owing to the hazards to which growing crops are exposed, however, crop liens are not looked upon as a desirable form of security. The thing needed to bring crops into use as security for loans is a suitable form of crop insurance. Hitherto, hail insurance has been the only form of such insurance generally available. This by no means fully meets the requirements. Crop insurance, like life insurance, should cover all hazards beyond the control of the insured. Several attempts already have been made to give such coverage, and it is to be hoped that general crop insurance will in some way be made available on reasonable terms.

## Marketing Wheat.

When a farmer hauls a load of wheat to a flour mill and exchanges it for flour and feed the problem of marketing is a very simple one. Usually, however, the processes of marketing are much more complex than this. The wheat is hauled to a country elevator and sold. The price paid for it, and, to some extent, the marketing processes which follow, are determined by many factors, some of them far beyond the control of the farmer. Among these factors are (1) the class of wheat grown, (2) the quality of the grain sold, (3) the direction, distance, time, and rate of movement of wheat, (4) the farmer's financial situation, (5) the freight rate charged, and (6) the total production at home and abroad and the quantity carried over from previous crops. Discussion of these factors follows.

### Classes of Wheat.

Under the Official Wheat Standards of the United States, wheat is separated into six commercial classes as follows: (1) Hard Red Spring, (2) Durum, (3) Hard Red Winter, (4) Soft Red Winter, (5) Common White, and (6) White Club.<sup>1</sup> If wheat of one class has more than 10 per cent of another mixed with it, the mixture is classed "Mixed Wheat." Four classes, Hard Red Spring, Durum, Hard Red Winter, and Common White, are divided into subclasses on the basis of color and texture of kernels. Each of the first three classes named has three subclasses, while Common White has two subclasses. Subclasses are recognized because, so far as these classes are concerned, the best outward index of quality, from the standpoint of utilization of flour made therefrom, is the color and texture of the kernels, that is, whether dark, hard and vitreous, or yellow, mottled, and starchy.

*Hard Red Spring* wheat is grown principally in the north-central part of the United States (Fig. 41), where the winters are too severe for the production of winter wheat. Nearly 14 million acres of this class of wheat are grown annually in the United States, comprising nearly one-fourth of the

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<sup>1</sup> Classes 5 and 6 have been combined by recent order of the Secretary of Agriculture, effective July 17, 1922.

total wheat acreage. Although there are 24 varieties of Hard Red Spring wheat, about two-thirds of the acreage of this class is sown to one variety, Marquis. The strongest flours for bread making are produced from Hard Red Spring wheat.

*Durum* wheat is grown in almost the same area (Fig. 42) as Hard Red Spring wheat. The district of heaviest production of durum wheat is just west of the Red River Valley in North Dakota. About 4 million acres of durum wheat have been grown annually in the United States for several years. It comprises about one-sixteenth of the total wheat acreage. Arnautka and Kubanka are the leading varieties among the 11 commercial durum wheats grown.

Durum wheat usually yields more than Hard Red Spring wheat in this northern spring-wheat belt, because of its greater resistance to drought and to black stem rust.

*Hard Red Winter* wheat is grown principally in the central Great Plains area (Fig. 43), where dry summers and rather dry winters prevail. Hard Red Winter wheat is not well adapted to humid sections. More than 17 million acres are grown annually in the United States, comprising nearly one-third of the total wheat acreage. The leading varieties are Turkey, Kharkof, and Kanred. Hard Red Winter wheat is used in the manufacture of bread-making flour.

*Soft Red Winter* wheat is grown largely in the humid sections in the eastern half of the United States (Fig. 44). About 16 million acres are grown annually, comprising over 30 per cent of the total wheat acreage. About 65 varieties are grown, the principal ones being Fultz, Fulcaster, Mediterranean, Poole, Red May, and Red Wave.

Soft Red Winter wheat is used in the manufacture of both bread-making and pastry flours. The flour from Hard Red Spring and Hard Red Winter wheats often is blended with that of this class to make it a stronger bread flour.

*Common White* wheat is grown in both the eastern and western parts of the United States (Fig. 45). Where now grown it usually outyields the other classes of wheat. Over 3 million acres, or somewhat more than 5 per cent of the total wheat acreage, is sown to Common White wheat annually in the United States. More than 50 varieties are grown, the leading ones being Pacific Bluestem, Goldcoin, Baart, Defi-



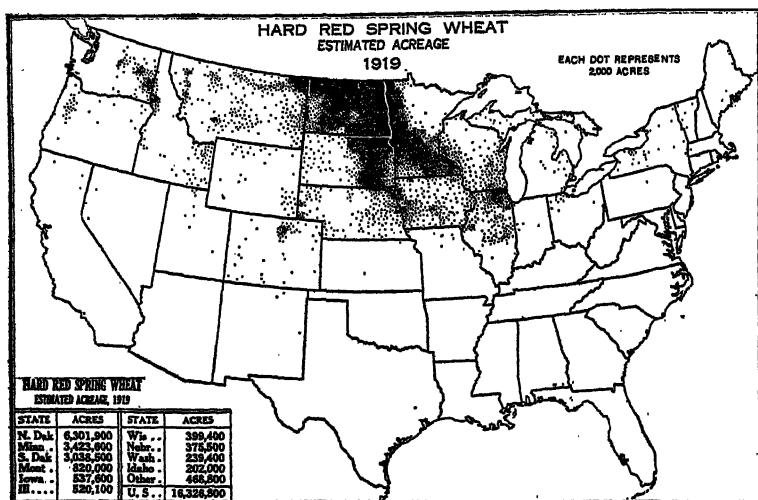


FIG. 41.—More than two-thirds of the spring wheat of the United States belongs to this class, which is grown under subhumid to semiarid conditions favorable to high quality. North Dakota, Minnesota, and South Dakota lead in its production. It sets the standard for bread-making flour.

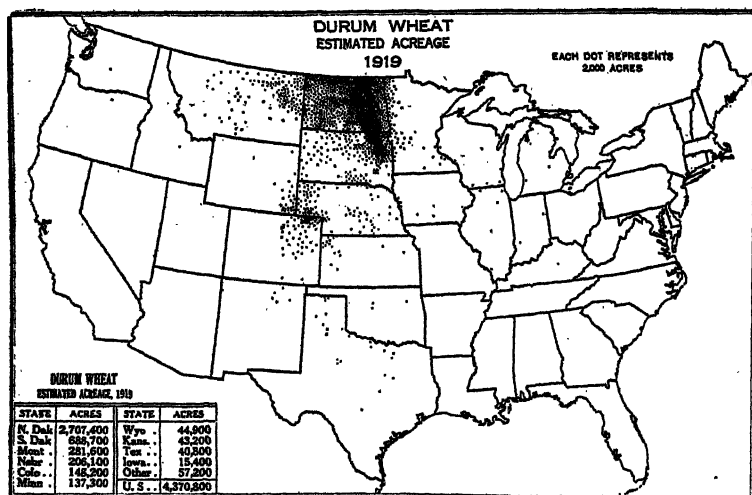


FIG. 42.—Durum wheat is grown in the midst of the hard red spring wheat area. The center of the area of production gradually is moving westward to drier districts. From durum wheat is made a granular flour called semolina from which macaroni, spaghetti, vermicelli, and other edible pastes are manufactured.

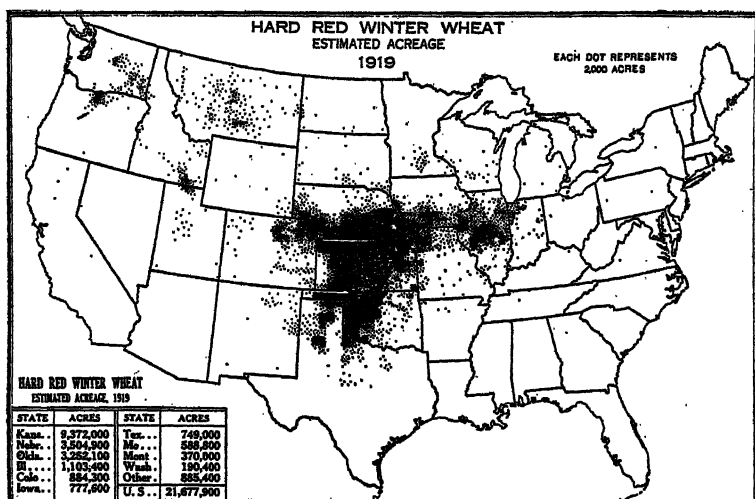


FIG. 43.—Hard red winter wheat is produced in enormous quantities in the central section of the Great Plains area. It occupies nearly one-third of the total acreage of all wheat and about half of the total winter-wheat acreage in the United States. Wheat of this class ranks next to hard red spring in quality for flour manufacture.

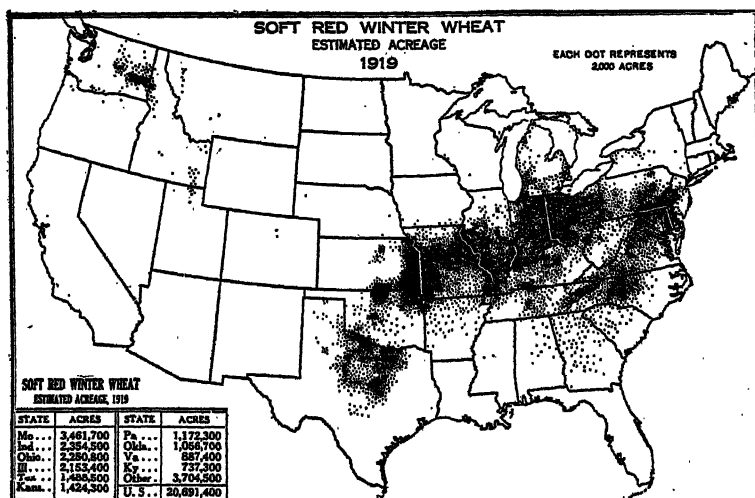


FIG. 44.—Soft red winter wheat is grown over a wide area, mostly under humid conditions. It also occupies nearly one-third of the total acreage of all wheat and nearly one-half of the total acreage of winter wheat. The States leading in its production are Missouri, Indiana, Ohio, and Illinois.

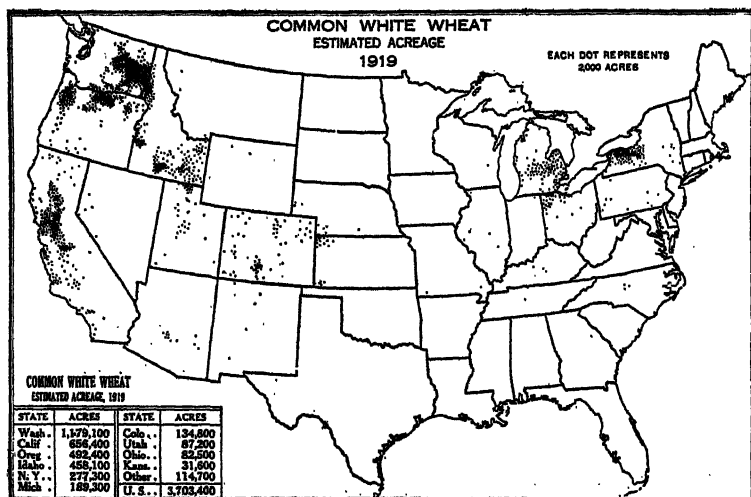


FIG. 45.—Common white wheat is grown chiefly in the Far West but also in the Great Lakes section. Washington, California, Oregon, and Idaho lead in its production in the West; New York and Michigan in the East.

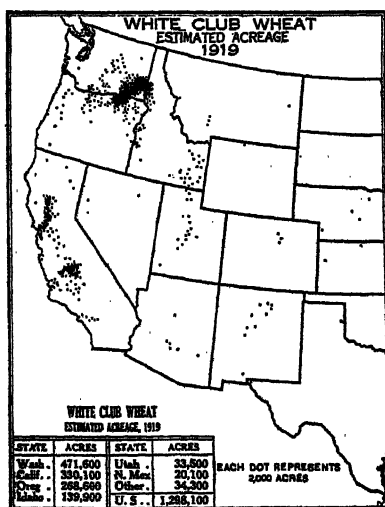


FIG. 46.—White Club wheat is grown only in the West, chiefly in Washington, Oregon, California, and Idaho.

ance, Dicklow, and Dawson (Golden Chaff). Common White wheat is used in making pastry flours and breakfast foods and to some extent in bread-making flours.

*White Club* wheat is grown only in the western part of this country (Fig. 46). In some sections in this region it out-yields all other classes. Although more than 1 million acres of White Club wheat are grown annually, it comprises less than 2 per cent of the total wheat acreage.

White Club wheat is used in making starchy flours for pastry or is exported to South America and the Orient.

## Quality of the Wheat Crops.

The wheat crop varies in quality from year to year, as a result of climatic and other conditions during the growing season, and especially in the harvest period. Each year the Department of Agriculture estimates the average quality of the crop from reports received from many farmers, millers, and elevator operators. These estimates for the 22 years, 1900 to 1921, are given in Figure 47. They may be considered as a general index for each year of all the conditions that have affected the crop while it was on the farm

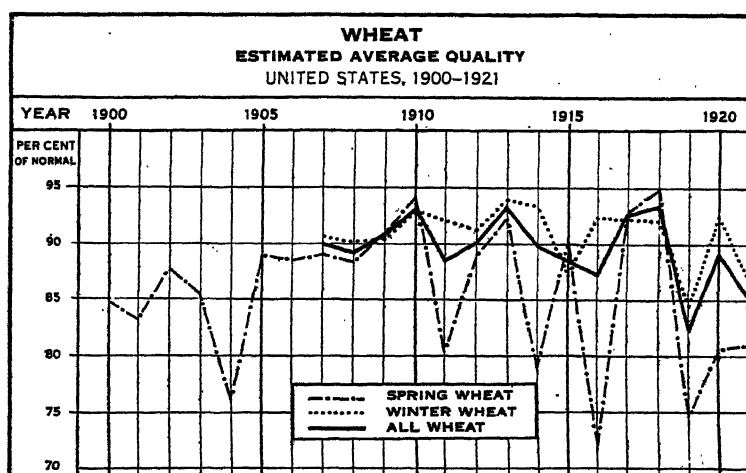


FIG. 47.—The quality of the wheat crop varies with the conditions under which it was grown. Unfavorable weather during growth, harvest, or thrashing is reflected in the quality of the grain. Drought, rain, and rust are the chief factors.

and, as such, they enable a comparison to be made of the general seasonal conditions as well as the crops of different years.

The very low quality of spring wheat in 1904 and 1916 was due chiefly to epidemics of stem rust. The low quality of spring wheat in 1911 and 1914 was due chiefly to severe drought. The low quality of all wheat in 1919 was due partly to drought, partly to rust, and partly to excessive summer rains. The crop of 1921 was of rather low quality, winter wheat being 87.1 per cent, spring wheat 82.2 per cent, and the average of all wheat 85.8 per cent, owing to summer heat and other causes.

**WHEAT**  
**ANNUAL VARIATION IN QUALITY**  
**RECEIPTS BY CLASSES & GRADES AT ALL INSPECTION POINTS**  
**IN THE**  
**CROP MOVEMENT YEARS, JULY, 1917 - JUNE, 1921**  
**AND**  
**AVERAGE FOR THE FOUR-YEAR PERIOD**

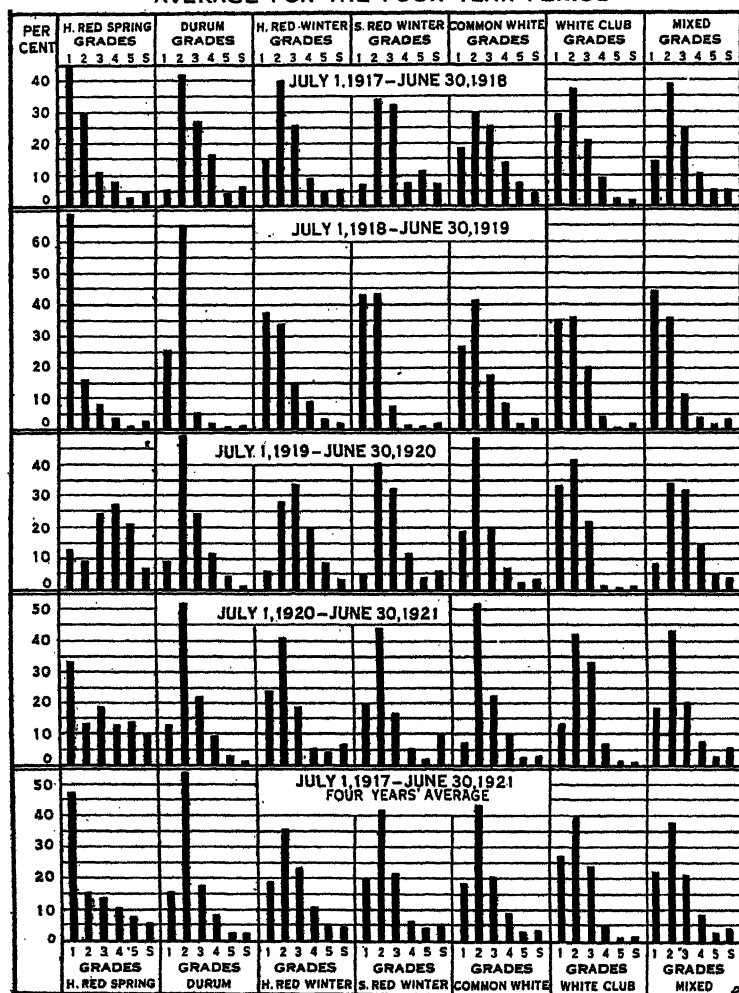


FIG. 48.—In these 4 years the great bulk of the wheat falls into the three upper grades, Nos. 1, 2, and 3. Nearly half of the hard red spring wheat, on the average, goes into No. 1. On the average of good and bad crop years together, more than 50 per cent of all wheat inspected is graded No. 1 and No. 2.

## Quality as Shown by Grade.

The quality and consequent grade of wheat are dependent primarily upon the weather conditions which prevail during the growing season and harvest and the conditions under which wheat is stored from time of harvest until it is marketed.

Each subclass of wheat is divided into five numerical grades (1, 2, 3, 4, and 5), dependent upon the following factors: Test weight per bushel, moisture content, percentage of damaged kernels, purity, cleanliness, and condition. Wheat failing to meet the specifications for any one of the five numerical grades is graded "Sample Grade."

Wheat, after leaving the farm, in finding its way through channels of interstate commerce to distant mills and to seaboard cities for export, is inspected and graded at terminal markets in accordance with the official wheat standards of the United States. There were 92 such inspection points in 1917, 118 in 1918, 143 in 1919, 158 in 1920, and 167 in 1921. The inspectors at terminal markets are not employees of the Government, but are employed by State grain-inspection departments, chambers of commerce, and boards of trade, or in some cases they operate independently on a fee basis. These inspectors, however, are licensed by the United States Department of Agriculture, and use the Federal standards.

In Figure 48 is shown the annual and average quality of the wheat produced in the United States in the four years, 1917 to 1920, inclusive, as indicated by the grades given to that portion of the crop which moved in interstate commerce from July, 1917, to June, 1921, inclusive. The graph is

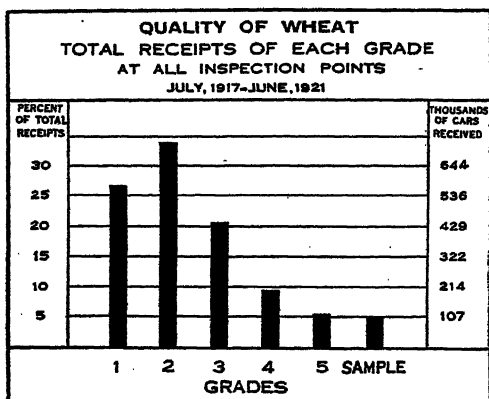


Fig. 49.—Bird's-eye view of wheat quality. Inspected receipts of all six classes, in all four years. About 60 per cent in grades 1 and 2, and about 80 per cent in grades 1, 2, and 3.

based upon the total carload receipts inspected at all inspection points in each year. Figure 49 shows in the same way the average quality of all classes in all four years. An indication of the effect of class and quality (grade) of wheat on price is given in Figure 59.

#### Surplus and Deficiency of Production in Relation to Movement of the Wheat Crop.

The marketing of wheat takes from the farm producer what he does not keep for food, feed, and seed, and places it in the hands of other consumers. It is estimated that

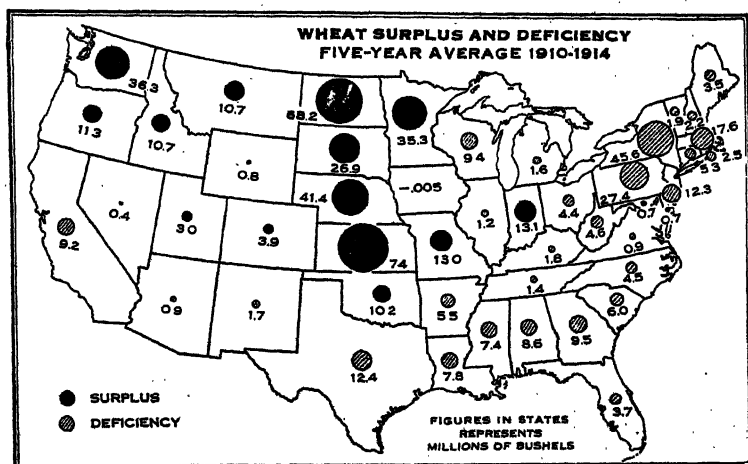


FIG. 50.—The States east of the Mississippi, except Indiana, Maryland, and Delaware, do not produce enough to supply their own needs, and the same is true of the Southwest from Texas to California. The great surplus-producing States are Kansas, North Dakota, Nebraska, Minnesota, and Washington.

about 60 per cent of the wheat crop ordinarily is shipped out of the county where grown. This may be considered the commercial crop, and it is this part with which we must deal in the discussion of wheat marketing.

A large part of the farm surplus is consumed in the United States by farmers who do not produce enough for their own needs and by people who are not engaged in agriculture.

Under the average conditions of the five years, 1910-1914, inclusive, 19 States (Fig. 50) each had a surplus of wheat above its own requirements for food, feed, and seed. This surplus supplied the other 30 States whose wheat production severally was below their consumption and provided the national surplus for export.



FIG. 51.—A busy day at a country elevator.

#### Movement from the Farm.

The first movement of wheat from the farmer to the ultimate consumer usually is to the local or country elevator (Fig. 51) and thence to great terminal elevators (Fig. 52) for further distribution to mills at home and abroad.



FIG. 52.—Terminal elevator surrounded by cars loaded with grain.



The wheat may be hauled directly from the separator as it is thrashed, or it may be binned on the farm first, or part may be handled in each way. In general, however, a rapid movement begins soon after harvest (Fig. 53), due to the necessity for money, the lack of storage space, and the cost of storing. In the Far West sack handling still is the rule, and, though much grain moves direct from separator or "combine" to the warehouse, the dry summer climate allows cheap storage on the farm, where the bags may lie for weeks in a great rick in the field without cover.

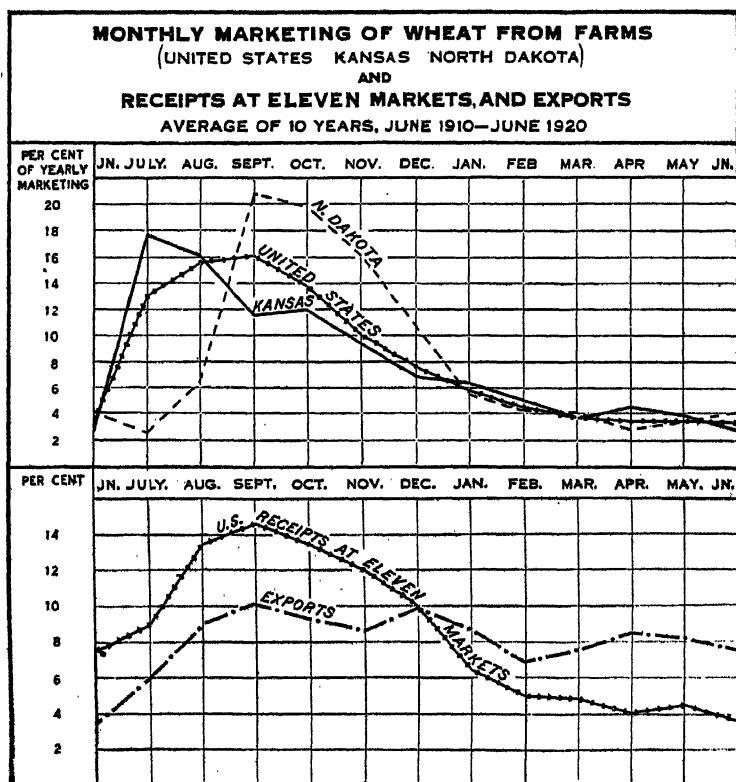


FIG. 53.—Movement of wheat from the farms is very rapid after harvest, which is progressively later from south to north. Nearly three-fourths of the crop leaves the farms in the first six months of the crop-movement year. Receipts at central markets naturally correspond very closely; exports, on the other hand, are much more evenly distributed throughout the year. (See Fig. 59 also.)

The average time and the rate of movement from the farm in Kansas and North Dakota and in the whole United States are shown in Figure 53. From Kansas the movement begins in the latter part of June or in early July. The heaviest movement from the farms in Kansas ordinarily is in July. As one goes farther north the harvest and the beginning of movement occur successively later. In North Dakota the new crop does not begin to move until in August and the peak of the flow occurs in September.

For the whole country, the peak of flow from farms is in August and September, with gradual decrease to January. More than one-third of the crop was marketed in July and August in the 10-year period (1911-1920) and nearly three-fourths of the entire crop in the first six months of the crop-movement year, namely, from July to December, inclusive.

The lower part of Figure 53 shows the progressive monthly receipts at 11 principal markets in the North Central States, and the exports from the country. Market receipts are seen to agree well with the movement from farms, but exports are much more evenly distributed throughout the year.

#### Financing Wheat Storage and Movement.

Since the fall in prices of farm products in 1920, marketing credit has called for increased attention. By marketing credit, in so far as the farmer is concerned, is meant chiefly the credit which is needed after the grain has been harvested and which will enable him to market his grain in an orderly manner. The amount and duration of this credit depends largely, as already intimated, upon the condition of the market. If the price of wheat is high, the farmer is inclined to sell quickly, in which case credit obligations at the banks will be rapidly reduced. Rapid release of a large volume of the crop, however, may have the effect of congesting transportation and storage facilities and depressing the price (Fig. 59). When market prices are exceptionally low, there is a natural tendency to postpone selling, and this causes a special demand for credit. In the absence of a suitable warehouse system, the security for such loans frequently is the same as for production credit. In many cases existing obligations are renewed for increased amounts.

The development of a well-organized warehouse system would be highly advantageous to wheat growers, as well as to producers of other nonperishable agricultural products, in obtaining credit during the marketing season. By utilizing a licensed and properly supervised warehouse, the farmer should find little difficulty in obtaining advances on his note secured by a warehouse receipt, or on drafts accepted by a warehouse association, when he desires to defer the selling of his crop. Such notes would be eligible for rediscount for six months at the various Federal reserve banks, when the proceeds are used for agricultural purposes.

Only meager information is available on the financing involved in the orderly movement of the wheat crop from the farmer to the mill or the exporter. Some interesting data on the sources of borrowings by different types of country elevators and warehouses, however, have been compiled by the Federal Trade Commission. The study covered a total of 4,925 establishments, including 2,353 line houses and 2,572 individual houses. The so-called line houses were subdivided as commercial, cooperative, mill, and malster, while the individual establishments were classified as cooperative, independent, mill, and malster.

All line houses, it was found, were financed largely by the head offices, this source of funds representing over 80 per cent of the total borrowings. Local banks furnished about 11 per cent of the loans, and the balance came from commission houses, mills, city banks, and other sources.

The individual houses were financed more largely by local banks, which furnished, in their case, 65 per cent of the total borrowings. Commission houses furnished 17 per cent and mills 3 per cent, while farmers and other local residents furnished about 2½ per cent. The balance, as in the case of line elevators, came from scattered sources.

There is little doubt, of course, that the commission houses, as well as the head offices of line elevators, in turn rely upon the larger city banks for considerable amounts of credit.

## Freight Rates.

The expense or cost of taking wheat from the farm to the market is an important factor in determining the price the farmer obtains for it. Freight rates make up an important part of the costs of marketing. Before the war it cost from 8 to 10 cents per bushel to ship wheat from Chicago to New York (Fig. 54) and about 12 cents from Kansas City to New Orleans. Beginning with 1917 the rates rose, and by 1920 they had doubled. The history of freight rates from Chi-

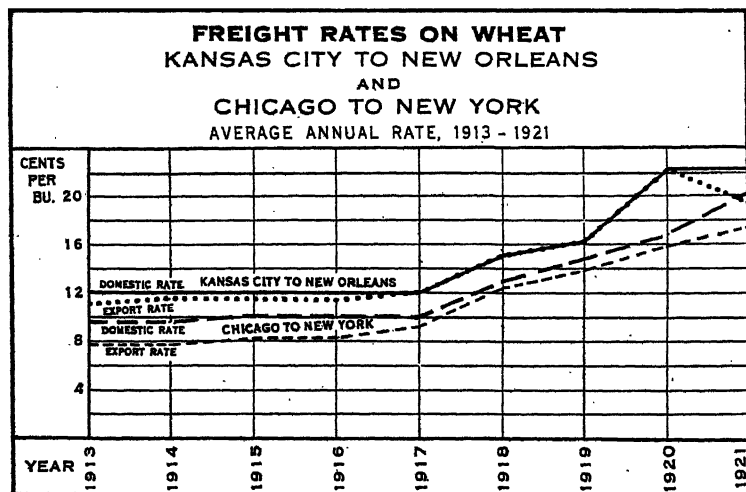


FIG. 54.—Freight rates on wheat from Chicago to New York and Kansas City to New Orleans rose rapidly with our entry into the World War and were higher in 1920 and 1921 than at any time since 1886. The average ocean rate for 1921 was higher than that of any prewar year for which records are available.

cago to New York is interesting. Following the Civil War rates were very high. Later they declined from about 32 cents per bushel in 1870–1873 to 8 cents per bushel in 1905.

The rate for 1920 was the highest since 1886. The high rates scarcely were felt until the price of wheat started downward. To pay 16 cents out of \$2.70 did not seem as burdensome as paying 8 cents out of \$1, but when the price of wheat fell to \$1.60 in New York, as it did in 1921, the 16-cent rate became a real burden, as most of the surplus wheat is produced west of Chicago.

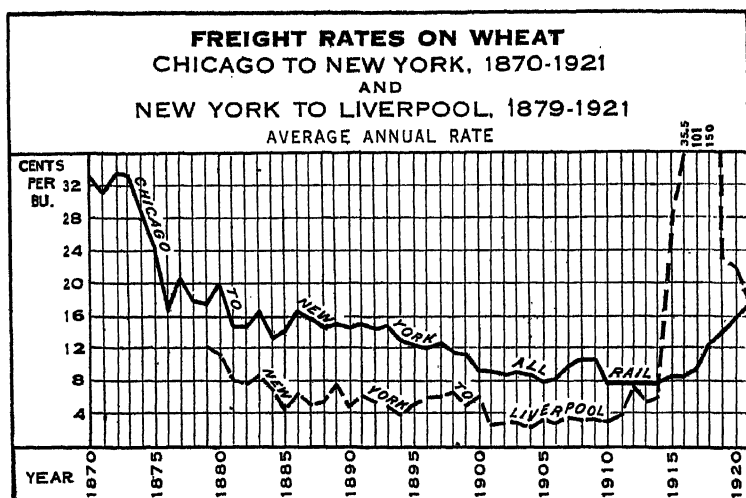


FIG. 55.—The freight rate from Chicago to New York is the export rate. The domestic rate is higher than the export rate, if there is any difference between the two. The New York to Liverpool rate rose above \$1.50 in 1918. (See Fig. 56.)

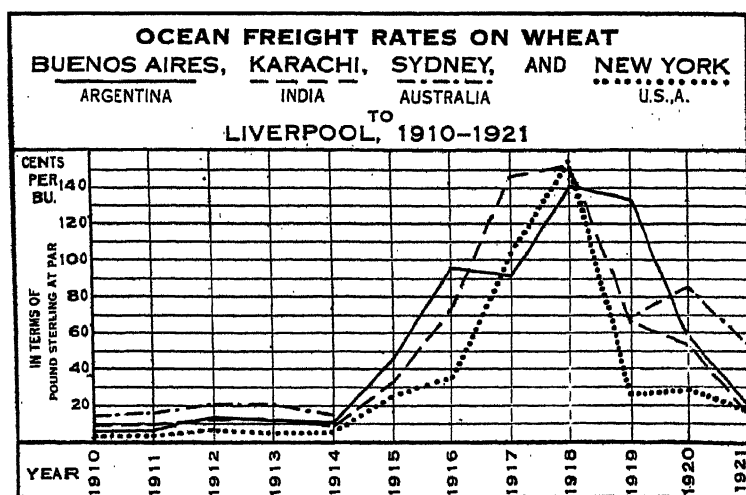


FIG. 56.—Ocean freight rates rose rapidly after the outbreak of the World War in 1914 and fell rapidly after the signing of the armistice on November 11, 1918, while rail freight rates (see Fig. 54) rose with our entry into the war and have not fallen. The New York to Liverpool rate usually is lower than from points in other producing countries because of the shorter distance.

The ocean rates on wheat from New York to Liverpool (Fig. 55) had declined to a very low point before the World War. In the 10-year period, 1901-1910, it cost less than 4 cents a bushel to ship wheat from New York to Liverpool. The submarine warfare made shipping very scarce and ocean freighting a very hazardous enterprise. Rates became very high; in fact, the allied Governments practically fixed rates through the most critical period of the war. Soon after peace was declared, rates began to fall, but they have not yet returned to the prewar level. The quotation for January 27, 1922, was  $9\frac{1}{2}$  cents per bushel, or more than double the quotation for January 30, 1914, which was  $4\frac{1}{2}$  cents.

The rates from New York to Liverpool, England, a great import market for Europe, generally are less than the rates from other wheat-exporting countries (Fig. 56). The longest haul is from Sydney to Liverpool, and from this point naturally the rates are highest. The rates from all countries were very high during the World War, but declined immediately after the Armistice. Rates from New York have fallen more rapidly than the rates from any other point, presumably because there is more competition for shipping from New York to Liverpool than from other points. It may be noted also that during the first part of the war period rates from New York to Liverpool were much cheaper than rates from other countries, which explains in part the very great increase in our exports.

#### Prices of Wheat.

Many factors enter into the determination of the price paid for wheat to producers in any locality at a given time. Among the important factors to be considered are (1) character of the local market, whether it is in an area of surplus or deficiency production (Fig. 50); (2) the distance to markets and cost of transportation (Fig. 57); (3) the time in relation to the season (Fig. 59); (4) the total available supply for the markets of the world in relation to the consumers' demands; and (5) financial conditions and prices of other commodities. Prices paid at the principal central and export markets are determined by similar conditions. The several factors to be considered can be discussed only briefly here.

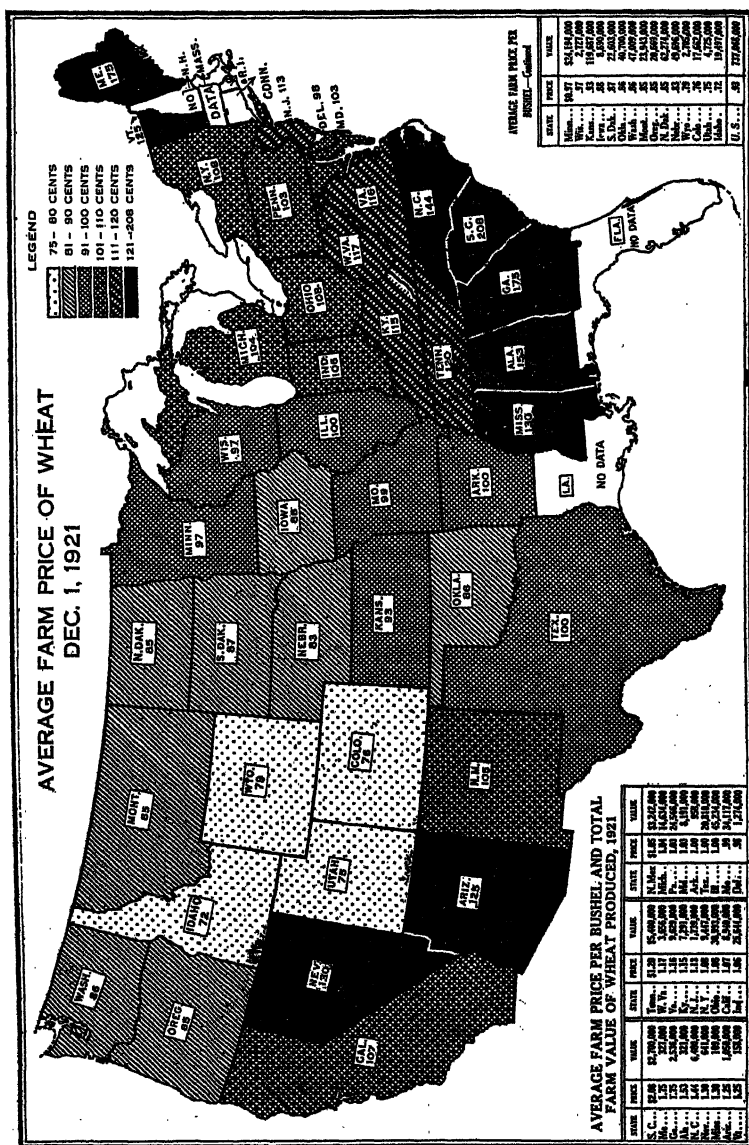


FIG. 57.—The average farm price of wheat is lowest in the States producing surpluses (see Fig. 50) and farthest from large central markets. The price is highest in those States deficient in production and farthest from the central markets where they must buy. Intervening mountain ranges have the effect of increased distance.

## Farm Prices.

*Local variations in farm prices.*—The wide variation in the prices paid wheat producers in the United States upon any given date is illustrated on the map in Figure 57, which shows the geographic distribution of wheat prices received by producers on December 1, 1921. Prices are lowest in those surplus-producing States which are most disadvantageously located with respect to the large world markets, and highest in those States of deficiency production which are most disadvantageously located with respect to supplies. Farmers in surplus-producing areas receive approximately the price paid at the nearest large central or terminal market, less the cost of placing their wheat upon that market. Farmers in deficiency areas receive approximately the price paid to producers in the most distant surplus-producing area from which the deficiency is made up, plus the cost of shipping that wheat into their locality.

*Annual variations in farm prices.*—Variations in the world's production and demand and changes in price levels cause nation-wide variations in the farm prices of wheat (Fig. 58). Examples of the effects of large and small crops, wars, Government price fixing, and inflation and deflation all are shown in the movements of prices through the last 10 years.

In the first two years, 1912-1913, crops were good, and there were only the normal seasonal price movements, mostly between 75 cents and \$1 per bushel. In 1914 the World War broke out, and the price rose rapidly through the remainder of the season until on May 1, 1915, it reached approximately \$1.40. The high prices in the autumn and spring encouraged a greatly enlarged acreage, and an unusually good season caused high yields and the greatest production ever had in this country. Consequently by the 1st of June, when a large crop seemed certain, prices had begun to fall. All of the important surplus-producing countries except Australia produced large crops, and consequently prices remained low through the crop year 1915-16. In 1916 the Russian surplus was shut out of the world's markets, the crop of



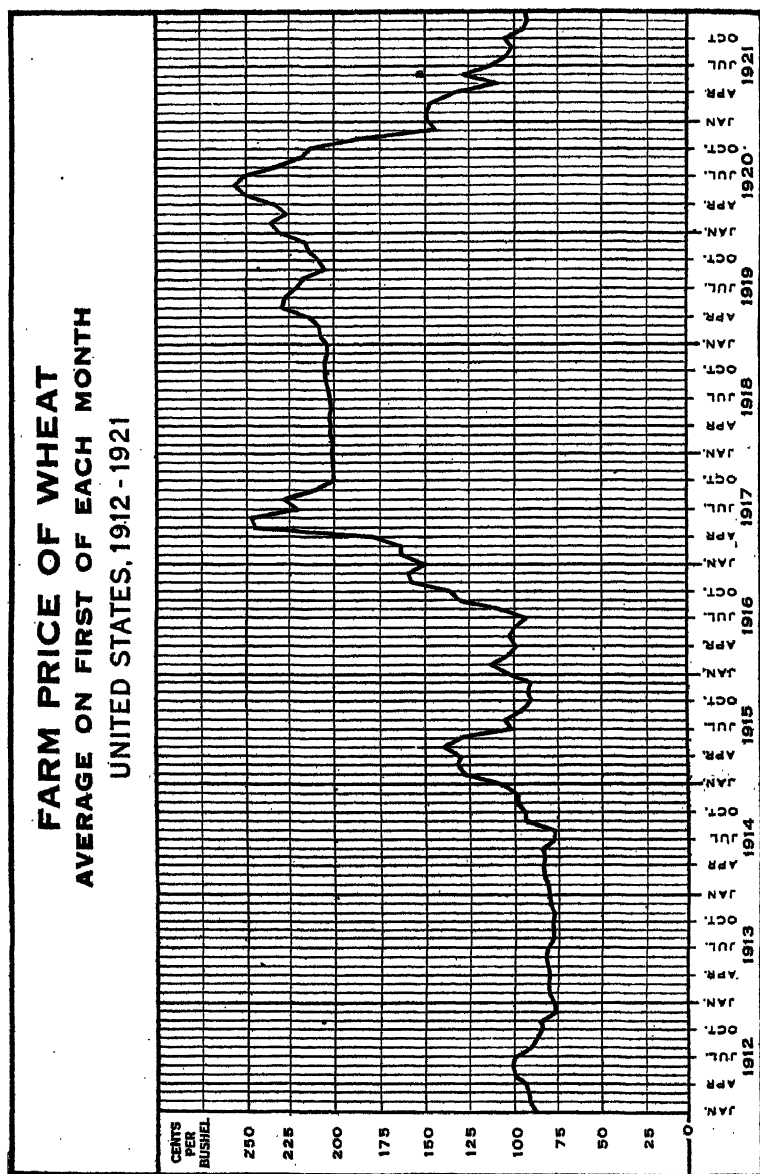


FIG. 58.—Note low farm price levels before the war, rise at the beginning of the war, fall with enormous production in 1915, rise with low production caused by rust injury in 1916, high levels after the United States entered the war, and rapid deflation after June 1, 1920.

the United States was short because of reduced acreage and severe injury by black stem rust, and prices rose rapidly after July.

After the United States entered the war in April, 1917, steps were taken to regulate the distribution and the price of wheat. The Food and Fuel Control Act of August 10, 1917, guaranteed a minimum price of \$2 per bushel for the crop of 1918. On August 30, 1917, the President fixed a minimum price for the 1917 crop at \$2.20 per bushel for No. 1 northern spring and its equivalents at Chicago, with differentials for grades and markets. Through the operations of the United States Grain Corporation this became the basic price for wheat. The average farm price of the whole country remained at a level of about \$2 per bushel throughout 1918. By an Executive order on June 21, 1918, the price of wheat was raised to \$2.26 a bushel for No. 1 northern spring and its equivalents at Chicago. In the spring of 1919 wheat prices rose sharply, reaching \$2.31 on May 1, but declined, under pressure of large acreage and large production, to about \$2.10 by October 1. With decreases in acreage and estimated production, prices rose rapidly thereafter, reaching \$2.58 on June 1, 1920, a month before the Government guaranty of a minimum price was terminated. General deflation began soon after and continued to the end of 1921, when the price stood near 90 cents.

Although the prices of all commodities did not rise as rapidly through 1916-17 as did the prices of wheat, after the price of wheat was fixed the average prices of all commodities continued to rise until May, 1920. Thus the prices through the war were not really as high as they seemed. Excepting the period from August, 1914, to October, 1915, and the period from August, 1916, to August, 1917, the price of wheat was relatively not far above the average prices of other commodities, and with the sharp break in the prices of other commodities wheat also fell. The precipitous fall and the low prices of 1921 have not been due to overproduction so much as to the general deflation of all prices. Compared with the general price level in 1921, the farm price of wheat fell to the lowest point it has ever reached in the United States.

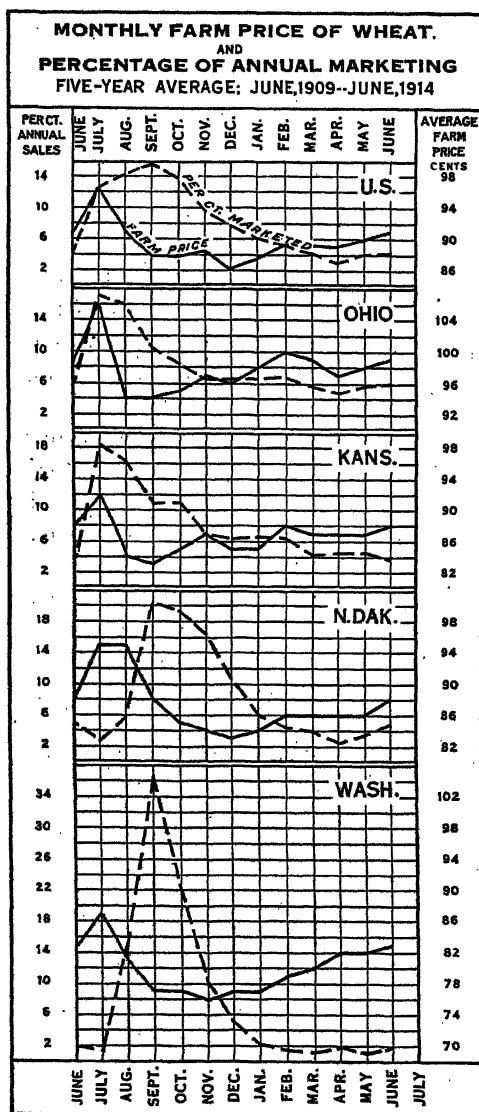


FIG. 59.—The farm price of wheat usually is relatively high on July 1, when the old crop is nearly gone and the new crop just beginning to move. Farm prices tend to fall rapidly during the next two months, when the great movement of wheat from the farms is taking place as harvest and thrashing progress.

*Seasonal marketing in relation to farm prices.*—A large part of the wheat crop is marketed in a few months after harvest (Fig. 59, see also Fig. 53), which causes a rapid decline in prices during the first few months of the new crop year (Figs. 58 and 59). This is one of the principal causes for the need of credit for storing grain. Taking the averages of farm prices of wheat by months from 1909 to 1913 as representing normal seasonal variations, it will be noted (Fig. 59) that the highest farm prices are paid about July 1, just as wheat of the new crop begins to arrive on the market. Prices decline rapidly from this high point until in September or October or occasionally later, after which they rise slowly and irregularly through winter, spring, and early summer to the highest point again about July 1.

## Market Prices.

Market prices for wheat, like farm prices, vary with the class, subclass, and grade of wheat, as well as with the location and nature of the market.

*Market prices of different grades of wheat.*—In Figure 60 are shown the prices, by months, of No. 1 grade of the leading subclass of four classes of wheat, and the discounts in price for grades 2, 3, 4, and 5 below the price of No. 1. These figures cover the crop-movement year from July, 1920, to June, 1921, and cover subclasses at St. Louis, Kansas City, and Minneapolis. The prices are averages of the reported cash sales of each grade on those days in each month on which all five grades were represented. The prices of No. 1 are given in dollars and cents. The prices of the other grades are discounts in cents per bushel below the price of No. 1; for example, at St. Louis in July, 1920, No. 1 sold at \$2.75; No. 2 at \$2.73, a discount of 2 cents; and Nos. 4 and 5 at \$2.70, a discount of 5 cents below No. 1.

An outstanding feature of the graph is the wide spread between the prices of the different grades of Dark Northern at Minneapolis, compared with the narrow spread between the prices of the different grades of Hard Winter at Kansas City. While the figures given cover only one year, a study of similar data for other years shows a fairly similar condition.

Probably several reasons must be sought for the difference in price spreads between the different grades in the different cases. Hard Red Spring wheat is used almost exclusively for domestic milling. Minneapolis is the largest milling center in the United States. Most of the wheat arriving there is bought by sample by mill buyers to whom low-grade wheat is not attractive. The best grade makes a flour of extra strength and quality and is in great demand for milling by itself and for blending with other wheats. For this reason premium prices are paid for grade No. 1. There is markedly less demand for the successively lower grades because they are of less value for blending with wheat of other classes. This will account, in considerable measure, for the very heavy discounts for the lower grades. Hard spring wheat

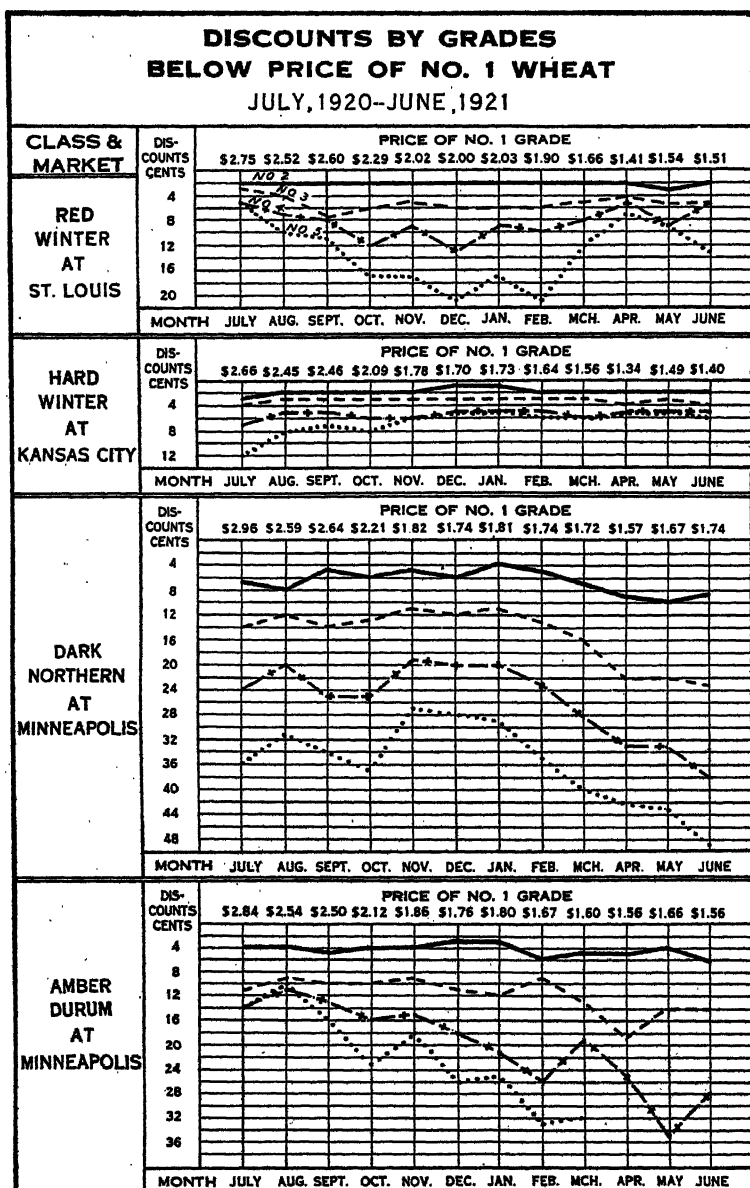


FIG. 60.—Market prices of No. 1 grade in the 1920 crop of the highest subclass in each of the four major classes of wheat, at one important market, by months, in the crop-movement year from July, 1920, to June 1921, with price discounts for grades 2, 3, 4, and 5 below the price of No. 1.

also usually is subject to more unfavorable climatic conditions than the winter wheats, and, therefore, more of it would fall into the lower grades, except that the requirements for admission to grade 1 are lower in the case of Hard Red Spring wheat. In spite of that fact about 35 per cent of the crop of 1920 graded below No. 3.

On the Kansas City market a considerable portion of the wheat is sold to exporters and to dealers other than millers whose competitive buying tends to absorb the lower grades at relatively small discounts. Grades 1 and 2 at Kansas City are both deliverable on contracts in the option or future trading market. Grade No. 3 also is deliverable upon future contracts at a discount of only 5 cents per bushel. These conditions serve to narrow the spread in price between grades, as compared with the spread in the milling market at Minneapolis.

*Prices in world markets.*—The prices of wheat in all the great markets of the world generally move together. The price in Liverpool generally is higher than the prices in New York and Chicago (Fig. 61), but it is very difficult to compare prices in these three markets. It is not proper to take the difference in prices as the cost of transporting and handling the wheat between the different markets. The cost of transportation and charges for handling are two different factors in causing the difference in prices. Market quotations in New York and Chicago generally follow very closely the market quotations in Liverpool, but certain conditions may so affect any one of the three markets as to throw it out of line with the others.

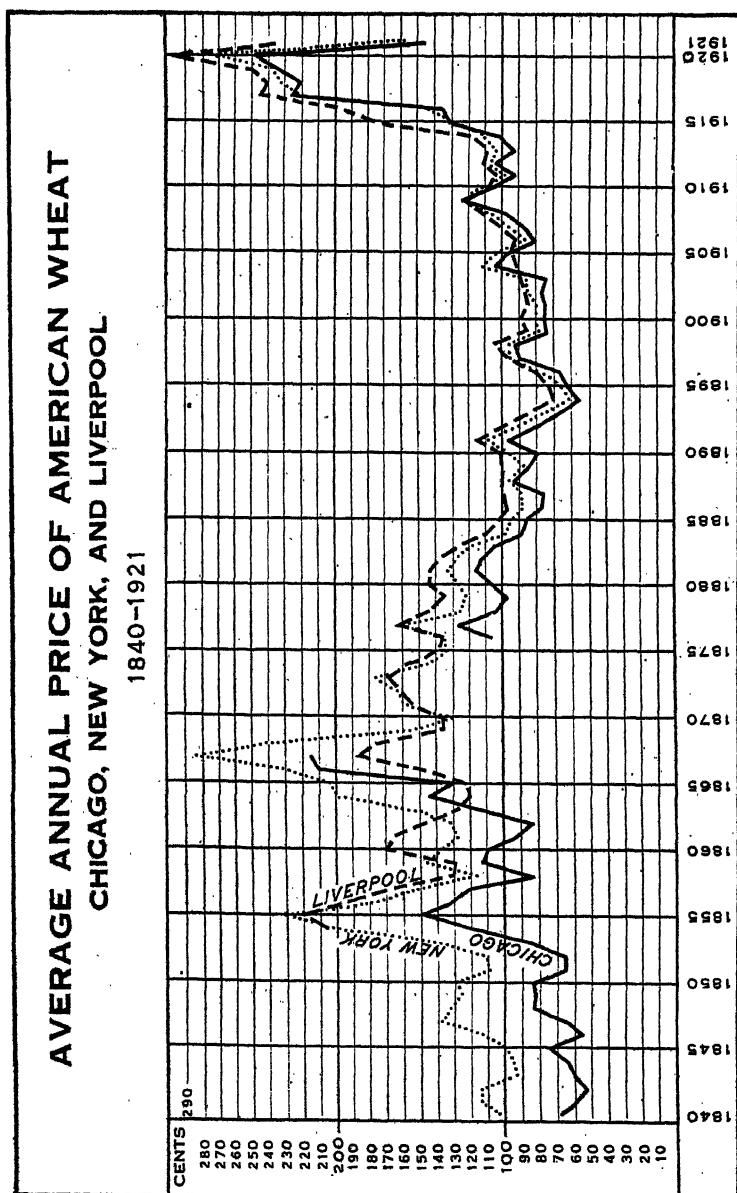


FIG. 61.—Trend of average annual price of American wheat in Chicago, New York, and Liverpool from 1840 to 1921. In general, the spread in price has decreased steadily throughout the years, but prices in the three markets are not readily comparable.

### The Situation and Outlook.

What does the future hold for the American wheat grower? After the foregoing summary of the economic phases of the production and marketing of wheat, this is a natural and vitally important question. Any attempt to answer it requires consideration of the long-time trends (1) in the prices and purchasing power of wheat; (2) in acreage, acre yield, and production; (3) in consumption and export; and (4) in total population and the numbers living under rural and urban conditions in this country.

#### Farm Price and Purchasing Power of Wheat.

The quantity of goods that can be bought for a bushel of wheat is more significant than the number of dollars or cents for which it will sell. In Figure 62 is shown the trend of farm price and of purchasing power in terms of the 1913 dollar, from 1866 to 1921.

On December 1, 1866, the currency price of wheat was slightly higher than the peak price on December 1, 1919, but the purchasing power per bushel in 1866 was some 30 cents higher. The price fell after the Civil War just as it has fallen since the World War. In both cases the fall has been due largely to deflation, and in both cases the purchasing power also has fallen farther in proportion; that is, the price of wheat has fallen more rapidly and farther than the average prices of all commodities. In purchasing power the price of 94 cents on December 1, 1921, was lower than the low price of 49 cents per bushel on December 1, 1894.

As acre yields vary greatly from year to year, the farm value and purchasing power per acre (fig. 62) are a better index of the returns to farmers than are the price and purchasing power per bushel. A relatively high price per bushel was paid for the 1916 crop, but the farmer did not have as many bushels as usual. In fact, on the average, he received less in purchasing power for the 1916 crop than for the 1915 crop, which he sold at a lower price but of which he had many more bushels.



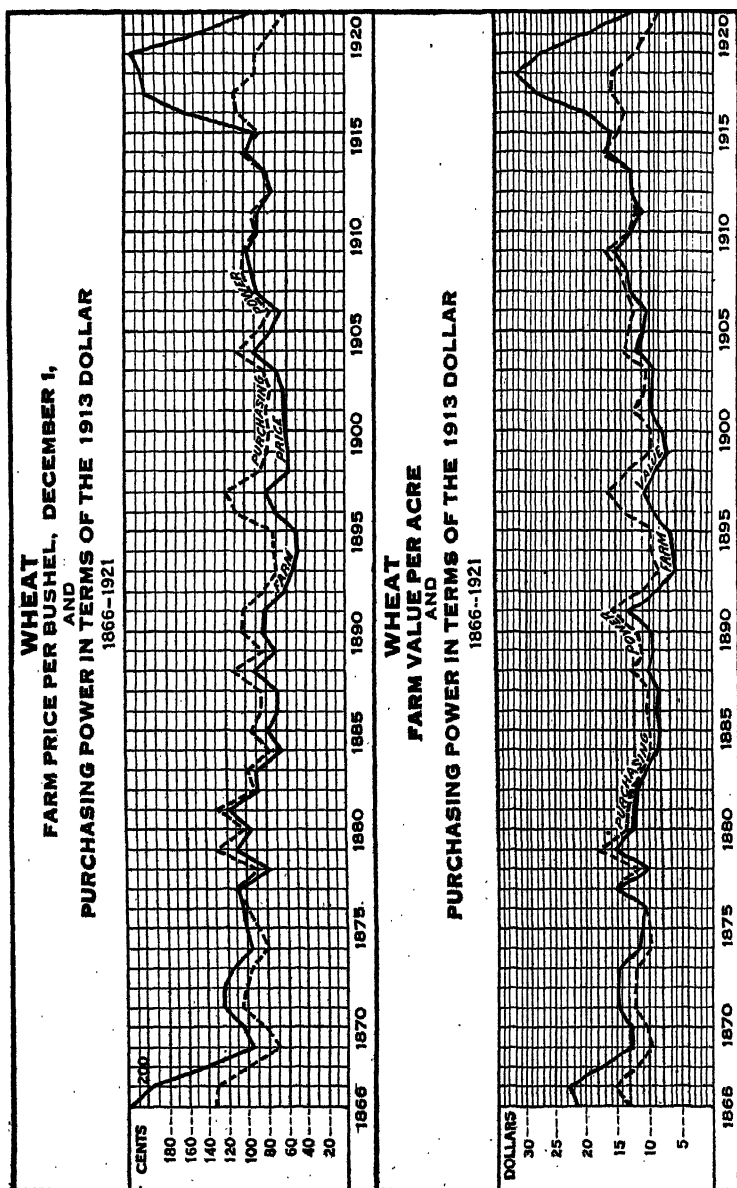


FIG. 62.—The purchasing power of wheat per bushel and per acre, in terms of the 1913 dollar, was low during and after the Civil War, fairly high from 1877 until 1909, and exceedingly low during the World War, in comparison with the farm price of wheat.

At the present time (May 1, 1922) the farm price of wheat is considerably higher than at the end of 1921, and, as the prices of other commodities farmers buy (Fig. 40) are decreasing slowly, the purchasing power of wheat is rising.

### Trend of Acreage and Production.

The trends of acreage, acre yield, and production have been shown in Figure 7. Acreage has increased steadily as the country has developed. Average acre yields also increased about 25 per cent, or from 12 bushels to 15 bushels, in the 25 years from 1890 to 1914. As a result, production

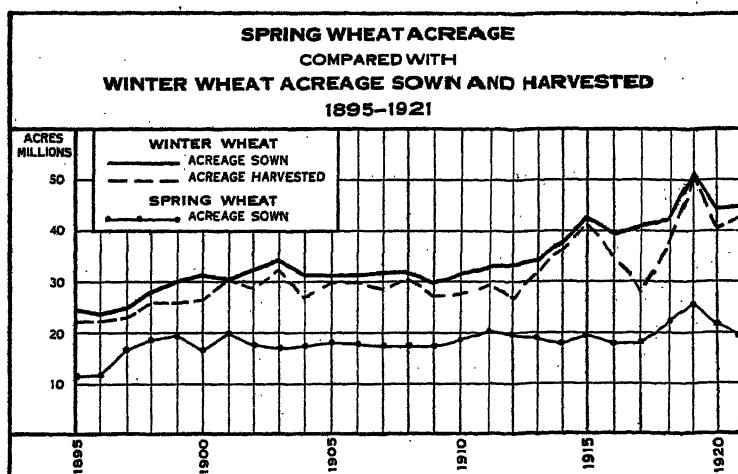


FIG. 63.—The acreage of winter wheat sown is larger than that of spring wheat and has tended to increase faster both before and during the World War.

increased steadily. The average acreage harvested in the 10 years before the war (1905-1914) was about 48 million acres, of which over 18 millions were spring wheat and nearly 30 millions were winter wheat (Fig. 63). As the average abandonment of winter wheat acreage sown was about 8.5 per cent in those years, nearly 33 millions of acres of winter wheat were sown annually.

During the World War acreage and production were greatly stimulated by patriotic impulses and by high prices. At the same time average acre yields decreased slightly, probably on account of unfavorable seasons and less ade-

quate farming methods due to the decreased labor supply. The enormous total of 75,684,000 acres was grown in 1919, but this dropped to somewhat more than 61 million and 62 million acres, respectively, in 1920 and 1921. Further decrease in acreage perhaps may be looked for, but every effort should be made to maintain high acre yields.

The increase in winter wheat acreage since 1911 has been proportionately greater than that of spring wheat. In 1919 the acreage of winter wheat harvested was 50,494,000 acres, in 1920 it was 40,016,000 acres, and in 1921 it was 42,702,000 acres, after decreases of about 2, 11, and 5 per cent, respectively, caused by winterkilling, had been subtracted. This means that about 45 million acres of winter wheat were sown for both 1920 and 1921, compared with an average of about 33 millions in the 10 years from 1905 to 1914.

The preliminary estimate of the acreage of winter wheat sown in the autumn of 1921 for the crop of 1922 is 44,293,000 acres, or scarcely any decrease from 1920 and 1921. However, unfavorable conditions in the autumn and winter, especially in the central part of the Great Plains area, have greatly injured the plants, and an average abandonment of 14.4 per cent has been estimated. This unusually high abandonment reduces to 38,131,000 acres the area of winter wheat estimated to be remaining for harvest in 1922, an area, however, which is still 5 million acres larger than the prewar average.

During the 20 years from 1898 to 1917, inclusive, the acreage devoted to spring wheat was fairly constant, with an average of 18,015,000 acres annually. The 20-million mark was reached only in 1911. The lowest acreage recorded in this period was 16,259,000 acres in 1900. In 1918 and 1919 the acreage was increased to 22,051,000 and 25,200,000 acres, respectively. In 1920 it dropped to 21,127,000 acres and in 1921 to 19,706,000 acres, which was still about 10 per cent above the prewar average.

Unfavorable spring conditions have much retarded the sowing of spring wheat in 1922. Probably this will result in a decreased acreage. If this proves to be true, and the facts will be known before this is printed, a decreased production of spring wheat is probable in 1922, which will be one factor in obtaining a better price.

With about  $4\frac{1}{2}$  million acres less of winter wheat remaining for harvest in 1922 than were harvested in 1921, and with a probable decrease in acreage of spring wheat in 1922, a decreased production of all wheat seems likely to result.

#### Domestic Use of Wheat.

Most of the wheat crop of the United States is consumed annually within the country (Fig. 64). A small percentage of the crop is used for seed; a varying quantity is exported; and the remainder, also variable in quantity, is held in the country as carry-over from year to year.

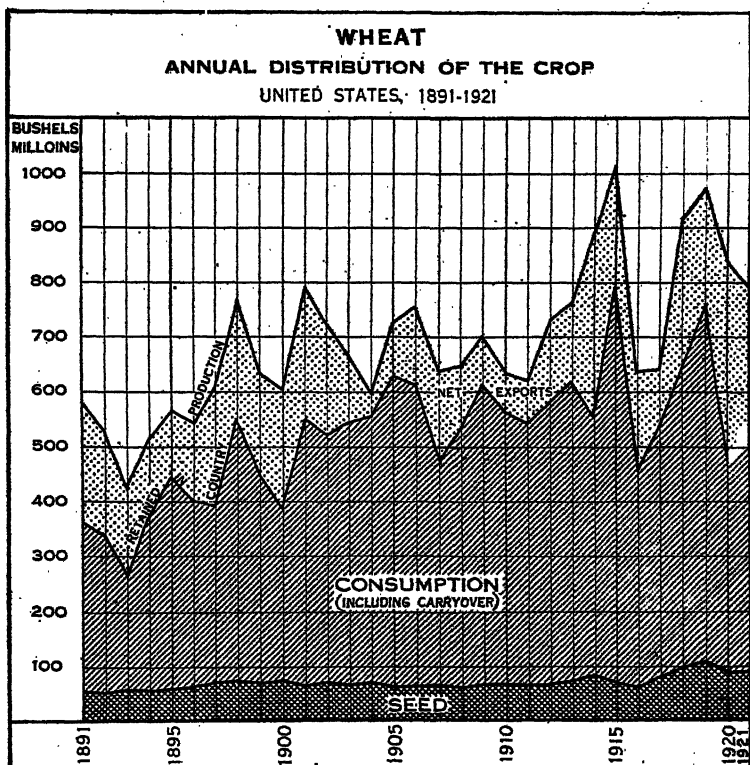


Fig. 64.—Disposal of the American wheat crop in the last 30 years. Compare with same factors on a per capita basis in Figure 71.

The total consumption can not be determined directly, but only by subtraction of all other items. It varies slightly, no doubt, from year to year in relation to the price of flour and the general condition of business and employment. Consumption increases with total population, of course, and per capita consumption is increasing also. During the war consumption was decreased by the use of wheat substitutes, but that was only a temporary condition.

Carry-over, also, can not be determined accurately by direct methods. In a long period of time it becomes increasingly negligible, as the carry-over of one year is eaten or exported in the next. At the end of 25 or 50 years, there-

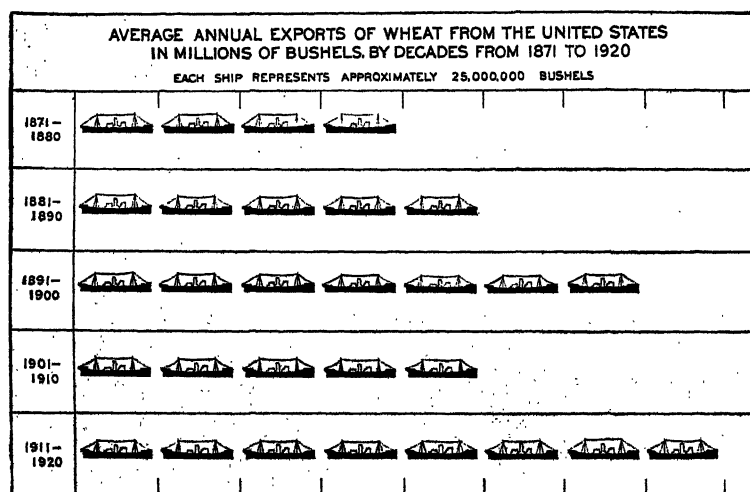


Fig. 65.—Wheat exports increased steadily in the 30 years from 1870 to 1900, decreased in the next 10 years, and increased enormously in the last 10 years, stimulated by war-time needs.

fore, only the final carry-over need be considered, and the consumption is found by subtracting the total seed requirements and exports. These trends, reduced to this average condition, are shown later on a per capita basis in Figures 71 and 72.

#### Exports.

The United States has exported a surplus of wheat in every year of its history, except 1836. International trade in wheat on a large scale may be said to have begun in 1850, in which year the repeal of the British Corn Laws went into

effect. At this time practically all of the wheat of the United States was produced east of the Mississippi River, and there usually was not a large quantity available for export. The trend of exports by decades since 1871 is shown in Figure 65 and by years since 1849 in Figure 67.

The Civil War cut off the southern market for northern wheat, and a good demand in Europe at the same time caused a large increase in the exports during those years. Following this war there were a few years of small exports, but by 1869 they had returned to the Civil War level. Exports increased rapidly from 1866 to 1880, after which there was a decline until 1890. This was followed by a period of large exports until 1902. From 1878 to about 1902 was the great surplus-producing period of the development of wheat production in the United States. From 1903 to 1913 the exports were much less than in the previous decade (Fig. 67).

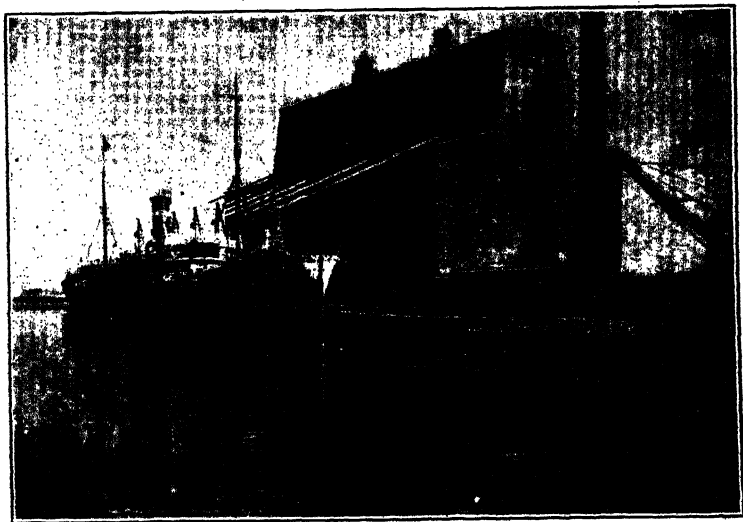


FIG. 66.—Wheat being delivered through spouts from the bins of a water-front elevator into the hold of a steamer, for export. Wheat for export is loaded into ships at ports on the Great Lakes, the Gulf of Mexico, the Atlantic Ocean, and the Pacific Ocean. At Pacific Coast ports, much of the wheat still is handled in bags instead of in bulk.

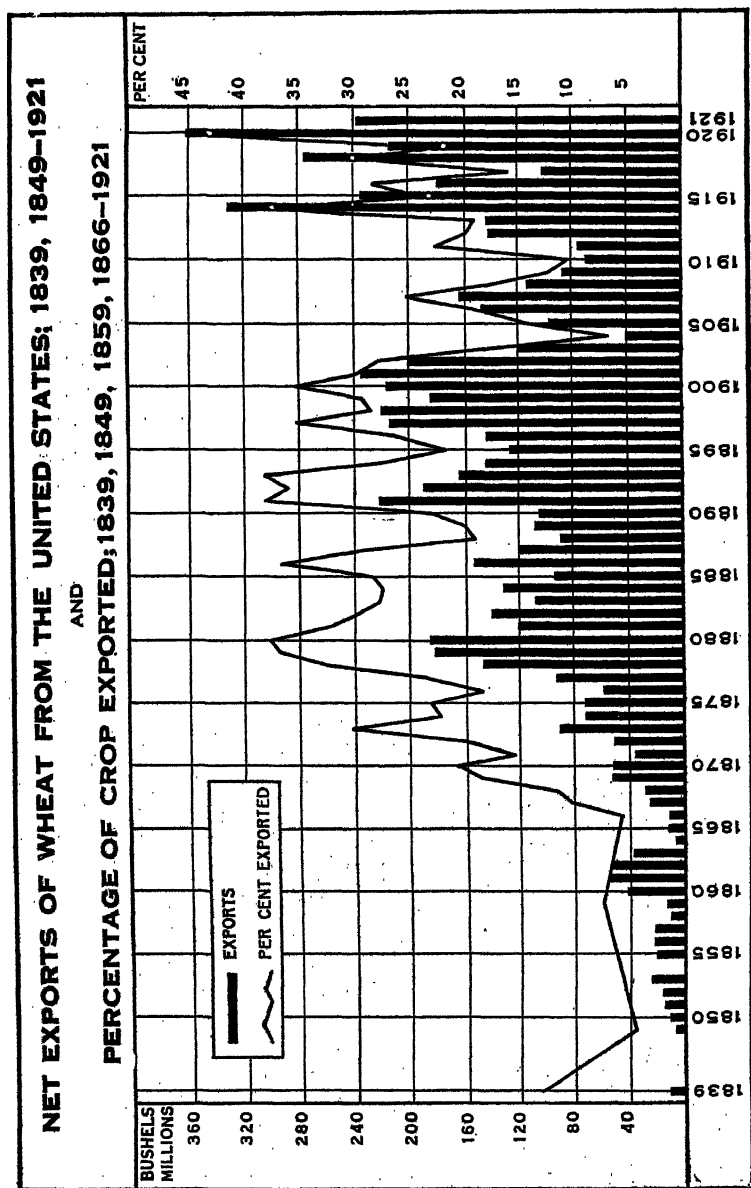


FIG. 67.—Exports vary much more than production, depending partly on foreign demand. In general, rapid extension of wheat production in the last quarter of the last century caused high exports, representing a high percentage of our total production. After a decade of decline the World War stimulated still greater exports but no larger percentage of the total.

The exports of the recent war period seem very large, but in percentage of the total of the crops produced they have not been greater than the exports of the period from 1880 to 1900. It is probable, however, that the future will show a continuation of the prewar trend of the years 1903 to 1913, inclusive.

#### International Trade in Wheat.

All the countries in the world are tied together through international trade in wheat (Figs. 68 and 69). The annual surplus from the great producing countries is poured into the consuming countries which do not produce enough to supply their own needs. Russia has been our greatest competitor in production and the United Kingdom our greatest buyer. The effect of the war upon the movements in wheat may be seen by comparing the movements in 1920 with the average movements in the five-year prewar period, 1910-1914, inclusive. The biggest and most significant change is the elimination of Russia as a producing country. Lack of the Russian surplus was made up by increases in production in the United States, Canada, and Argentina. The great reduction in India is due to a poor season in 1920, and the same was true in 1919 also. A most important economic question is how the future demand for our wheat will be affected by the return of Russia to her former place in international trade. Will Russia come back, and how rapidly? The question of how far Canada, Argentina, and India can continue to increase their acreage and production also is very important to us.

#### Population and Future Production.

Since Colonial times the United States has been an exporter of wheat. For nearly half a century our wheat exports have been large in quantity and very important in our total international trade in agricultural products (see Figs. 2, 65, and 67). During the last 20 years, however, the volume of these wheat exports has been decreasing, except under the artificial stimulation of the recent war period.



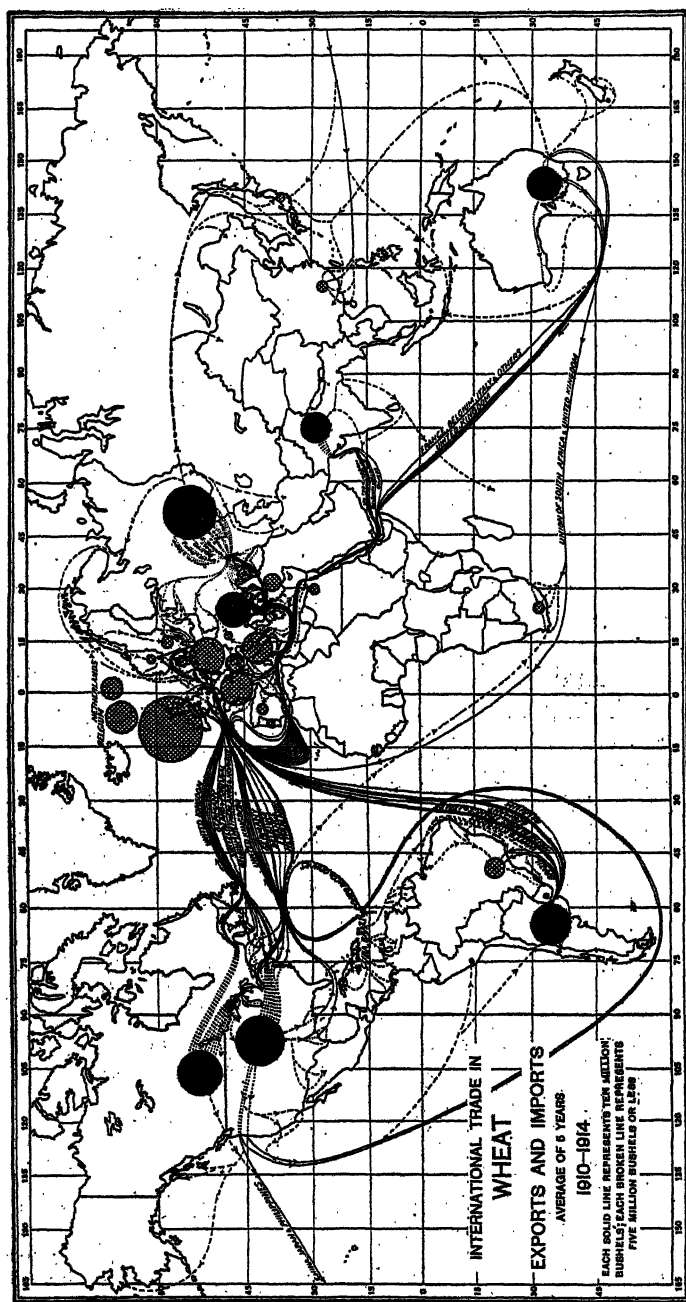


FIG. 68.—International trade in wheat before the World War, showing surplus production, trade routes, and destination. The two hemispheres are fairly well balanced in production. Western Europe is the great purchaser. Exports are represented by solid black circles; imports by shaded circles.

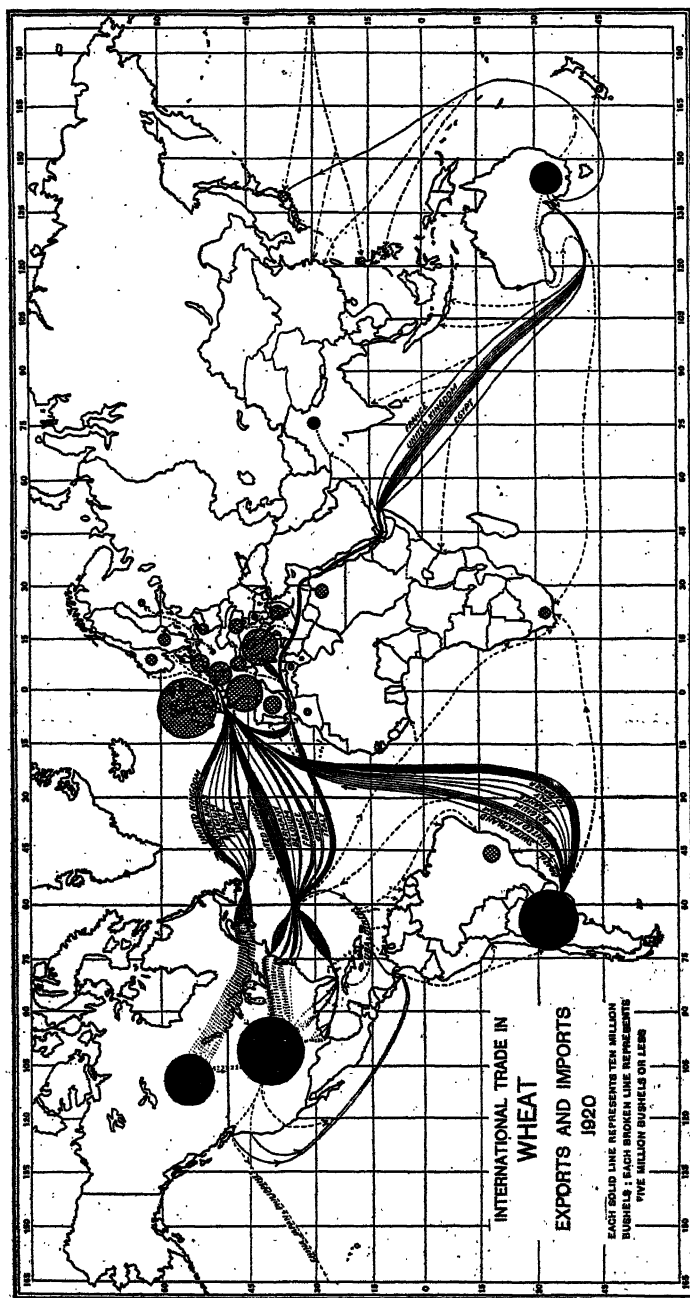


FIG. 69.—International trade in wheat after the World War, showing surplus production, trade routes, and destination. The western hemisphere has greatly increased its production, while production in the eastern hemisphere has enormously decreased. Russia and Hungary produce no surplus, while India has had two bad crop seasons.

This decrease has been due chiefly to our steadily increasing population (Fig. 70) and the lack of new lands suitable for profitable wheat production under present conditions.

Increase in population has been due partly to births and partly to immigration. The birth rate is affected somewhat by economic conditions in this country. Immigration is affected by legislation here and by economic conditions here and abroad. Without question our population will continue to increase, though the rate will be governed by the factors named. Increasing population will require a proportionately increasing supply of wheat. Wheat production, however, has been increasing less rapidly than population in this country, and it is very probable that this will continue to be true, at least until we reach the point where we consume practically all we produce.

Per capita consumption of wheat in this country has been increasing steadily during the last 80 years at least (Figs. 71 and 72). This has been due partly (1) to great improvement in milling processes, which make bread more attractive; (2) to increasing prosperity, which enables more people to eat white bread; and (3) to an increasing proportion of our population in cities.

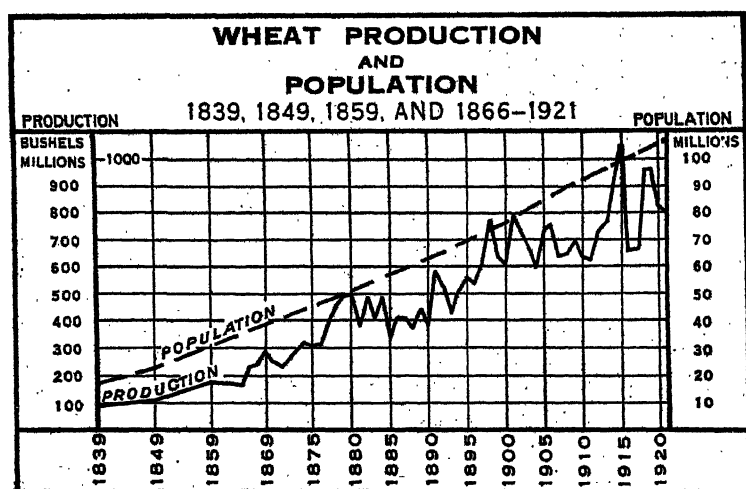


FIG. 70.—Population has increased more rapidly in the United States in the last 20 years than has wheat production, in spite of enormous production during the World War.

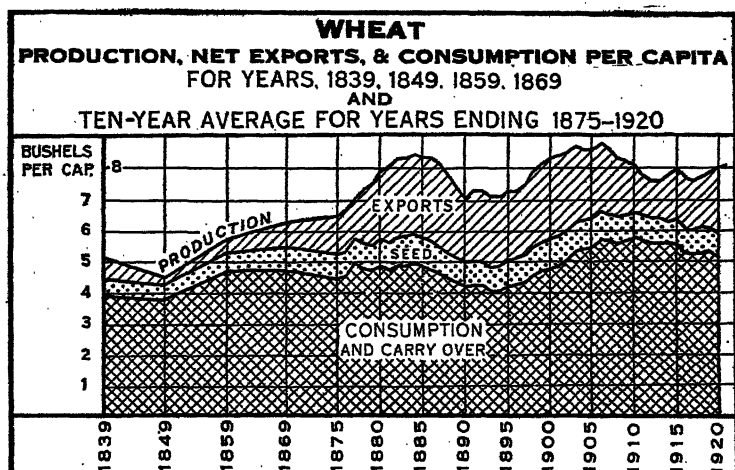


FIG. 71.—On a per capita basis consumption is increasing and production and exports are decreasing.

It is certain that city dwellers consume more wheat per capita than do those who live in villages and in the country. This probably is due in part to the lack of gardens in cities and in part to the comparative cheapness of bread and the further fact that no cooking is required. The proportion of the total population living in cities is increasing rapidly, which is a factor in the present and future trend of wheat consumption.

Per capita consumption increased (Fig. 72) from 3.8 bushels, the average of 1839 and 1849, to 4.9 bushels as the average from 1875 to 1884, and to 5.6 bushels as the average from 1905 to 1914. This rising trend, interrupted by the World War, doubtless now has been resumed. How much longer will it continue? In some countries of Europe, especially Belgium and France, per capita consumption has risen to about 8 bushels of wheat annually.

With increasing population, increasing per capita consumption, and decreasing per capita production (Fig. 72), there is a steadily increasing demand for our wheat at home. In comparatively a few years, if present trends continue, we shall be eating all that we produce. Of course production

can and will be increased if the prices paid for wheat will make such increase profitable. The greatly increased wheat production during the war, occurring under the stimulus of very high prices and patriotism, was partly at the expense of well balanced rotations and other principles of sound farming. As wheat prices become better in future, production can be increased through the use of more fertilizer and the farming of less productive land. As production and consumption tend to become equal new sources of supply must be sought in order to feed the increasing population. The needed supply may be grown at home or imported from Canada, Argentina, and other countries where lands and labor are cheaper than in the United States.

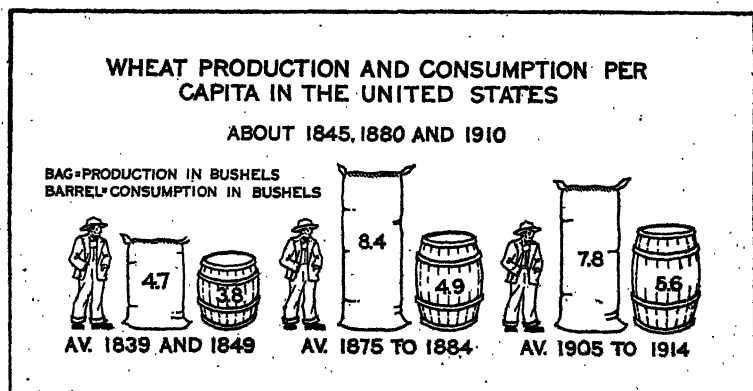


FIG. 72.—Per capita production has reached its maximum and is slowly declining, while per capita consumption slowly rises.



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HE corn crop is considered in this article from a broadly economic standpoint, principal attention being given to those things which determine its profitability to the farmer, and to showing the steps by which corn has come to occupy the place it holds in the world to-day.

### The Importance of Corn in the United States.

Unknown to the world before the discovery of America, corn stands to-day the equal in world production of any other cereal. An important crop in many countries of the world, it is first and foremost an American crop. Grown in every State of the Union, it reaches its true preeminence in the Corn Belt, that strip of productive land stretching from Ohio westward to the Missouri and beyond.

Corn is the most important crop in the United States both in acreage and in value. Corn growing is the work of millions of farmers, and about a hundred million acres of our land are planted to corn each year. It is especially important in nearly all the eastern portion of the United States, as shown in Figure 1. In the western and extreme northern portions of the country corn is not an important crop, owing chiefly to climatic conditions unfavorable to its growth.

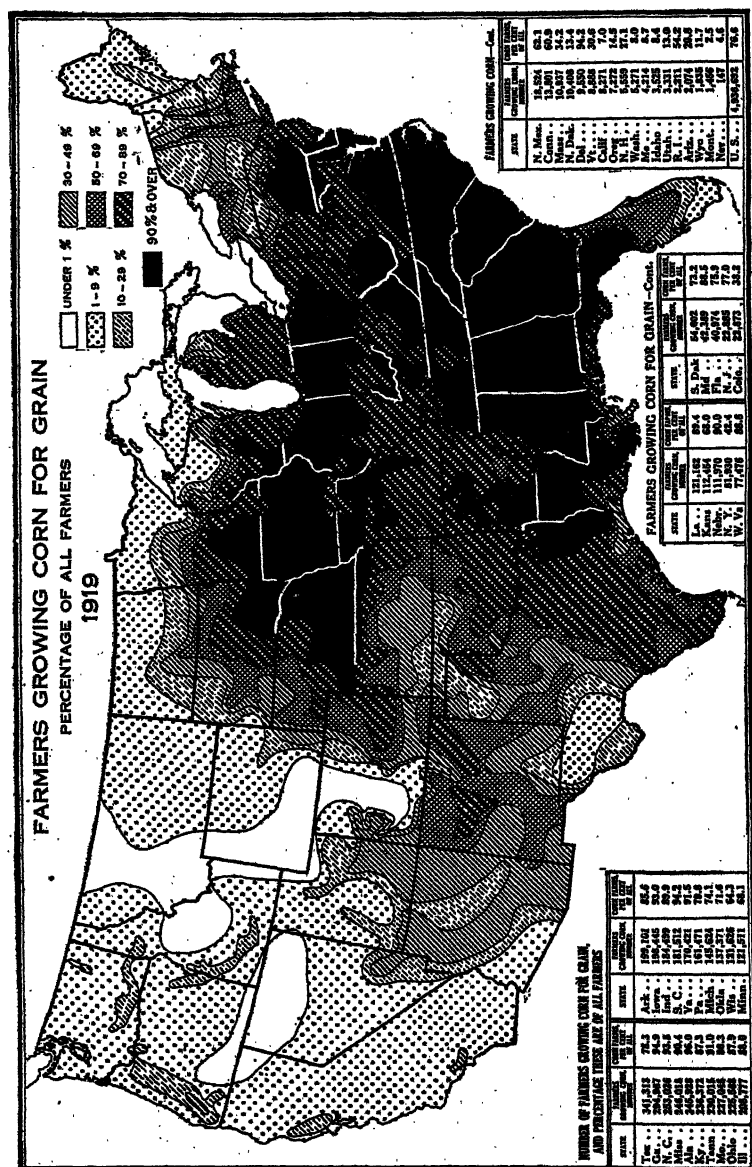


FIG. 1.—In the blackened areas corn was grown for grain on more than 90 out of every 100 farms in 1919. As the shading becomes lighter a smaller percentage of the farms produced corn for grain. Only in the Rocky Mountain region and in certain other small areas of the far West is corn practically unknown as a crop.

Of the 6,448,343 farms in the United States in 1919, 4,936,692, or more than three-fourths, are reported by the 1920 census as producing corn. With a corn acreage (not including corn cut for forage or silage) of 87,771,600 acres, this is an average of about 18 acres of corn on each farm producing it. Whatever influences the corn crop, then, whether it affects the growing corn or the harvested crop, and whether it be weather, costs, or prices, must concern very many people.

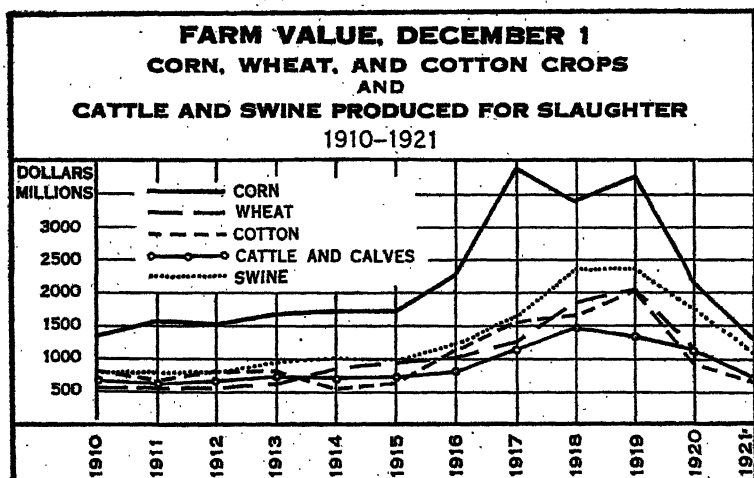


FIG. 2.—The value of the corn crop in the United States is usually about double the value of the wheat or cotton crop, and about equals the combined values of the cattle and swine slaughtered. In 1920 and 1921, however, the value of swine slaughtered was nearly as great as the corn value.

#### Relative Value.

The value of the corn crop to the American farmer is greater than the value of any other crop grown in this country. In 9 of the last 12 years (Fig. 2) the value of corn has been greater than the combined values of wheat



and cotton. In 8 of these years the value of corn has been greater than the combined values of all cattle and swine produced for slaughter. The farm value of swine produced for slaughter has been second to the value of corn in every year since 1910.

The average value of corn in the pre-war period, 1910 to 1914, was \$1,577,000,000 annually. The higher prices from 1915 to 1919 raised the average annual value of this period to the stupendous sum of \$3,024,000,000. The 1920 crop, the largest ever harvested, was valued at \$2,150,000,000, prices having fallen from the war-time figures. The 1921 crop, which was only 4 per cent less than the record crop of the previous year, was valued at only \$1,303,000,000 or 43 per cent of the annual value during the war period, and approximately one-sixth less than the pre-war value, although the crop was one-tenth larger than the pre-war average. The other crops and animal products increased in value during the war and decreased in 1920 and 1921, but not to the extent that the value of the corn crop decreased.

#### Uses.

The hog is the largest direct consumer of corn. It is estimated that 40 per cent of the total crop is fed to swine on farms. Horses and cattle, it is estimated, account for 20 per cent and 15 per cent, respectively. The next largest use of corn is for human food, 10 per cent of the crop being consumed on farms and ground in merchant flour mills (principally for food). The percentage of the crop used directly for food appears small, but, considering our large production, corn is seen to be an important food. Other details regarding uses of corn are shown in Figure 3. The outstanding use of corn is as a feed for animals, more than 85 per cent of it being used in this way. The exports of corn as grain are almost negligible.

In addition to the use of corn as grain the plant is used extensively in the form of silage, fodder, and stover, as feed for animals. In recent years, according to estimates by the Bureau of Markets and Crop Estimates, nearly 4 million acres of corn each year have been made into silage.

More than 2½ million acres of corn are cut for fodder, while large use is made of the stalks as feed for animals. More than 2 million acres have been grazed or hogged off each year for the last few years.

The corn crop and the swine and cattle populations are intimately interrelated. With the exception of limited areas from which corn is largely sold as grain, because of the proximity of markets, swine are found most abundantly where corn production is greatest. In these areas, too, the finishing of cattle for market is a prominent industry. The six States, Iowa, Illinois, Nebraska, Missouri, Indiana, and Ohio, producing 48 per cent of the corn in 1921, had within their borders about 45 per cent of the swine of the country and over 25 per cent of the cattle other than milk cows on January 1, 1922. In addition these States produced 32 per cent of the chickens and 35 per cent of the hens' eggs produced in the United States in 1919.

Corn, therefore, consumed either directly or in the form of meat and other animal products, is the principal source of food of the American people.

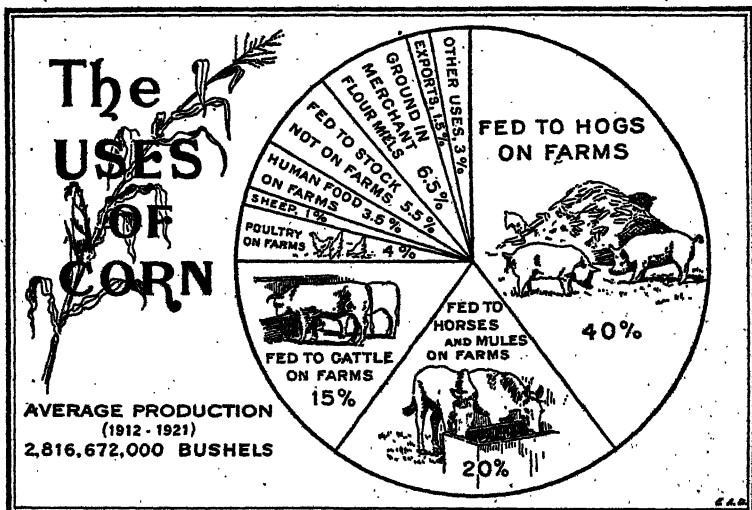


FIG. 3.—The uses of corn harvested for grain in the United States, based on estimates by the U. S. Department of Agriculture. More than 85 per cent is fed to live stock and somewhat less than 10 per cent is used directly for food.

### The World Production of Corn.

The United States produces about three-fourths of the corn crop of the world. There are no large competing countries, but corn is an important crop in Argentina, Brazil, Mexico, and some of the southern European countries. Argentina is the most important of the competing countries because of the fact that a large part of the Argentine crop is exported. There is no area in the rest of the world, however, comparable to the Corn Belt of the United States. Mexico probably has a larger proportion of its cultivated land devoted to corn production than any other country. Most of the corn is grown in small patches of a few acres, partly under irrigation, and is produced chiefly for human food.

World production is shown in Figure 4.

The total production of corn in Europe amounts to about one-fourth of the production in the United States. Italy, the Balkan countries, Hungary, Spain, and Portugal are the important corn-producing regions. Southern France also produces some corn. In the region westward from the Black Sea, including Rumania and the Hungarian plain, the rainfall, temperature, and soil conditions are similar to those of our Corn Belt, and corn is one of the chief crops, being used largely for food and also exported. Corn in Egypt and India is grown under irrigation, and is an important crop locally in these countries.

The geographic range of corn is limited by conditions of temperature, rainfall, and length of growing season. The northern and the southern limits of corn production practically have been reached, but may be extended slightly by developing varieties that will mature earlier, and by growing corn for silage or green fodder. Corn can be grown without irrigation only in areas where there is a considerable amount of summer rainfall. Temperatures both night and day must also be high during the growing period. These conditions exclude corn from a considerable part of the area lying between the northern and the southern limits of production but there remains a large potential area in which corn growing can be developed.

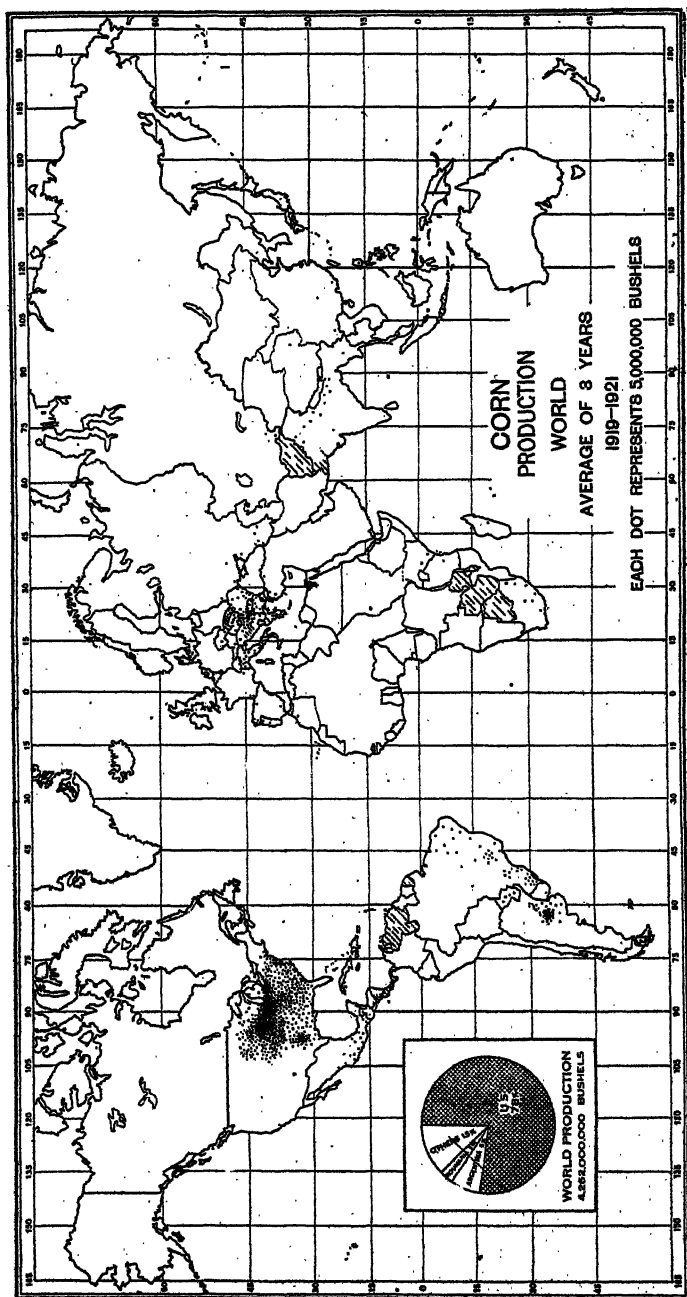


FIG. 4.—The United States produces three-fourths of the corn crop of the world. Corn is an important crop in Argentina, Brazil, Mexico, South Africa, India, and southern Europe. Its northern limits are found between 45° and 50° latitude north, and its southern limits between 30° and 40° latitude south. Quantity and distribution of summer rainfall are important factors in production within these limits.

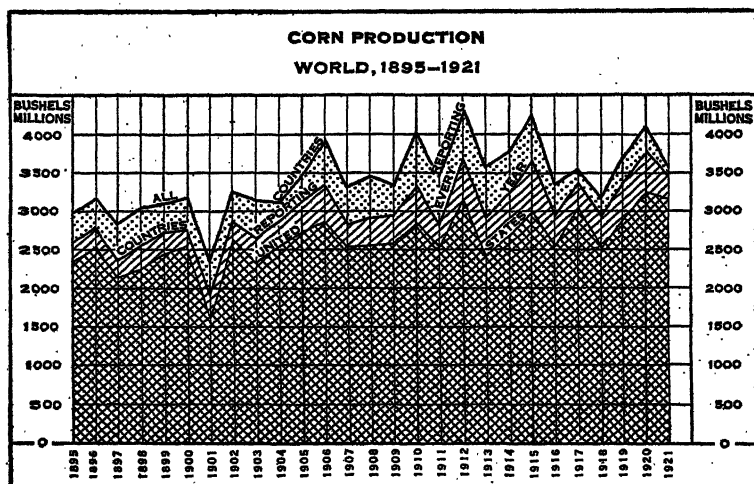


FIG. 5.—The countries reporting every year, 1895-1921, make up the great bulk of the world's total production. These countries are the United States, Canada, Argentina, Uruguay, Chile, France, Italy, Spain, Algeria, Egypt, Union of South Africa, and Australasia. World production varies with production in the United States.

The corn production of all countries reporting has increased from about 3 billion bushels annually, in the period 1895 to 1897, to over  $3\frac{1}{2}$  billion bushels annually in the last three years. (Fig. 5.) The United States produces such a large part of the world crop that the trend of world production is determined very largely by the trend of production in the United States. The fluctuations in world production from year to year follow the fluctuations in this country. When we have a short corn crop the world crop is short because it is not possible for high yields in other countries to make up for low yields in the United States.

#### Production in the United States.

The corn crop of the United States in 1921 was the third largest ever produced, having been exceeded only by the crops of 1920 and 1912. The area planted to corn in 1921 was about the same, however, as the average for the last 20 years, the immense crop being the result of an acre yield far above the normal average. Acreage, yield, and production in the United States since 1866 are shown in Figure 6.

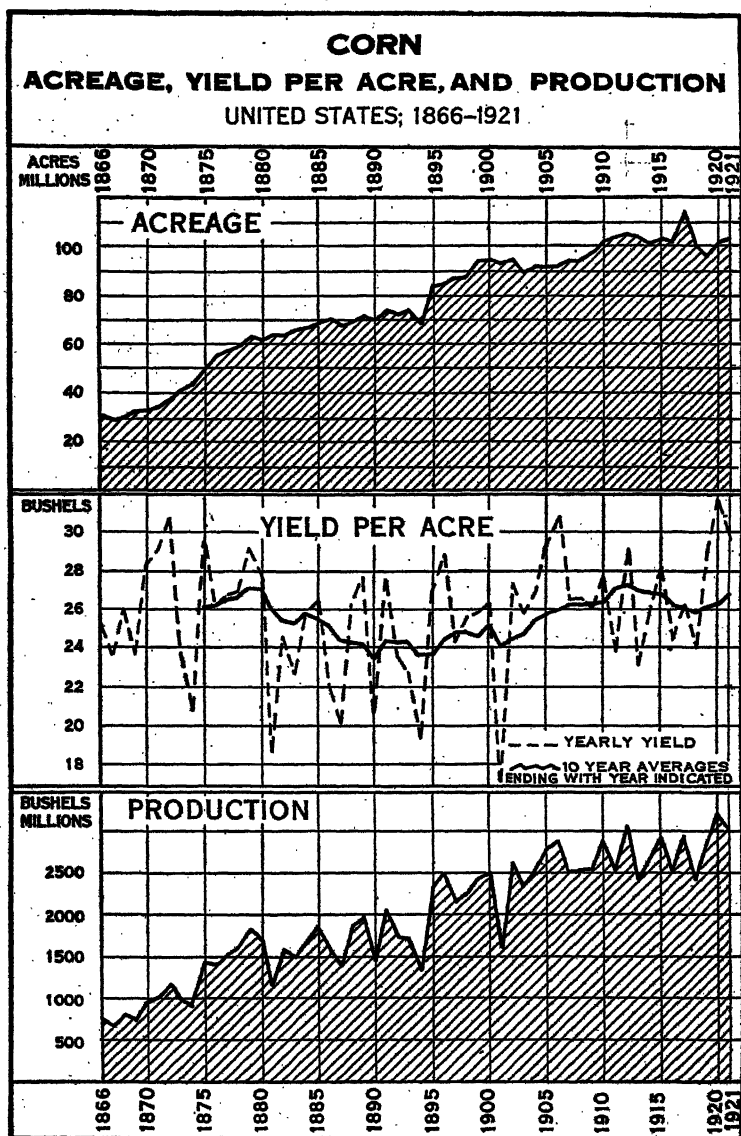


FIG. 6.—Acreage and production of corn have increased rather steadily since 1866. Production has fluctuated from year to year much more than acreage, because it depends not only on acreage but also on yield per acre, which has fluctuated largely in different years. Upward and downward trends, however, have occurred in yield per acre.

The area planted to corn has increased steadily from 1866 to the present time, being about three times as large now as at the beginning of this period. The expansion has been more rapid in certain periods than in others. The most rapid expansion was that between 1894 and 1899. An unusually large acreage was planted in 1917. This was due in large part, however, to the reduction in wheat acreage by winter killing, and in 1918 the area planted dropped back to about the average for the previous 10 years. From the trend of corn acreage since about 1910 it might be inferred that we have reached a point from which there will be little or no expansion in the future. It should be noted, however, that we have passed through one such period of stable acreage—1899 to 1908—after which there was a decided increase. We no longer have large areas of unoccupied land to add to the corn-producing area, but within the limits of present production considerable increases in corn acreage could be made without substantially reducing the acreage of other crops, excepting possibly pasture.

The production of corn depends both upon the acre yield and upon the area planted. The fluctuations in production from year to year, however, are almost solely due to variations in acre yield. In the entire period for which statistics of average annual yields are available, high yields have never occurred in more than three successive years. Relatively very low yields occur from time to time. The lowest yield was 17 bushels, reported for 1901, and the highest 31.5 bushels, in 1920. The trend of the acre yields was downward from 1880 to 1895 and upward from 1895 to 1913. At present there seems to be a fairly well defined tendency to increase the average acre yield, but the period has not been long enough to determine how much of this increase is due to weather conditions, and how much to other factors. Probably a part of the increase in acre yield is due to better cultivation and to a reduction of the acreage in areas where the crop is uncertain, as in parts of Kansas and Oklahoma.

Being the result of area planted multiplied by acre yield the production of corn shows the characteristic tendencies of both. It fluctuates annually with yield, while the tendency toward expansion or stability is determined more largely by the area planted. The large production of the

last 3 years was due not to unusual areas planted, but to unusual yields. Larger production may be obtained in the future either by increasing the area planted or by means of higher acre yields resulting from the use of better seed, better cultivation, and more fertilizer.

### Historical Development.

Corn was the earliest cultivated crop on the American farm. When the first colonists settled in Virginia and in Massachusetts they found the Indians producing corn and preparing various foods from it. The Indians taught the colonists how to plant, cultivate, and utilize it. The spade and the hoe were the only tools used at first, but English plows were soon introduced.

The Virginia colonists planted 30 or 40 acres in 1609, and about 500 acres in 1614, while in 1631 there was a surplus of corn to export. The Massachusetts colonists planted their first corn in old Indian corn fields and fertilized with a fish in each of the hills. Corn was the most important crop

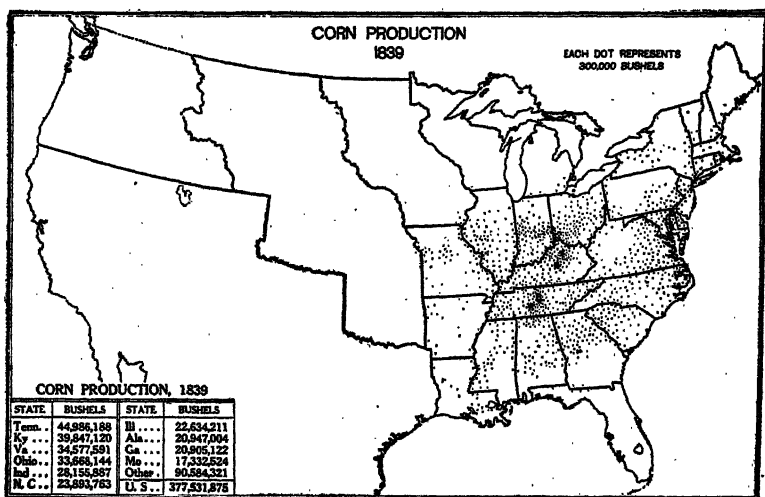


FIG. 7.—Corn was an important crop in the seaboard States in 1839, but production was most intense in central Tennessee, the blue-grass region of Kentucky, and the Scioto, Miami, and Wabash Valleys. Most of the present Corn Belt was only sparsely settled. The total production in 1839 was 377,000,000 bushels.



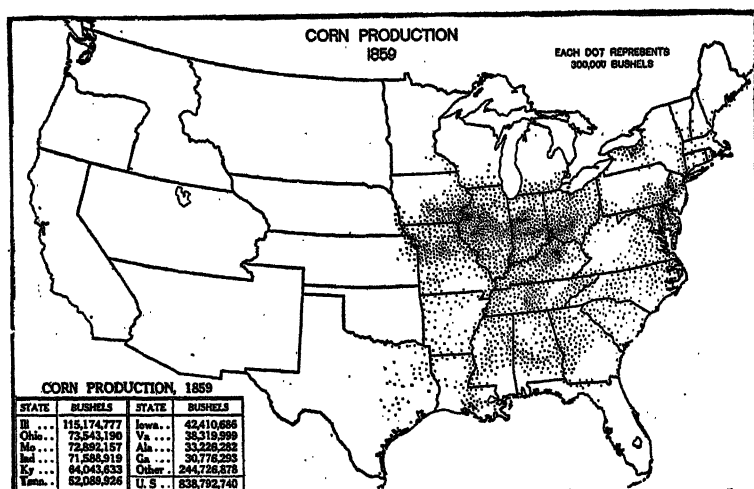


FIG. 8.—Corn production more than doubled from 1839 to 1859. Illinois, Iowa, and other prairie States became important producers. Total production in 1859, according to the census of 1860, was 838,792,740 bushels.

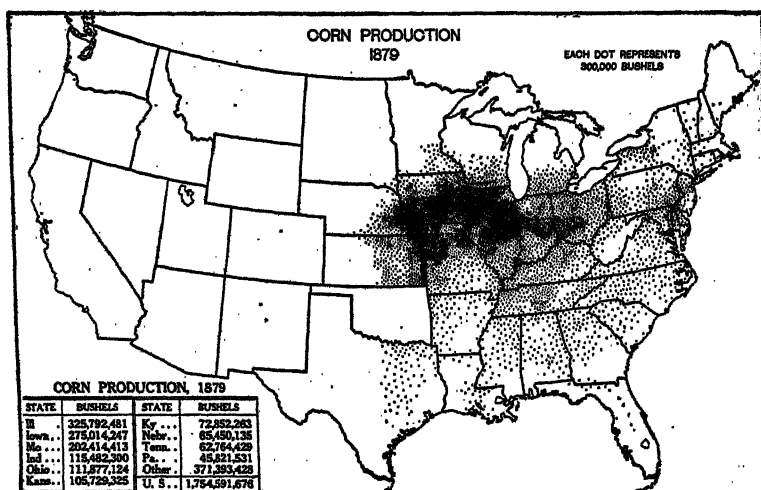


FIG. 9.—Corn production in 1879 was centered in Illinois, Iowa, and Missouri, nearly one-half of the crop being produced in these three States. Kansas and Nebraska were developing rapidly as corn producers. The Corn Belt had come into existence. Corn growing had pushed westward and northward. Large quantities of corn could be produced more cheaply on the prairies than in the forested regions. Total production in 1879 was 1,754,591,676 bushels (census figures).

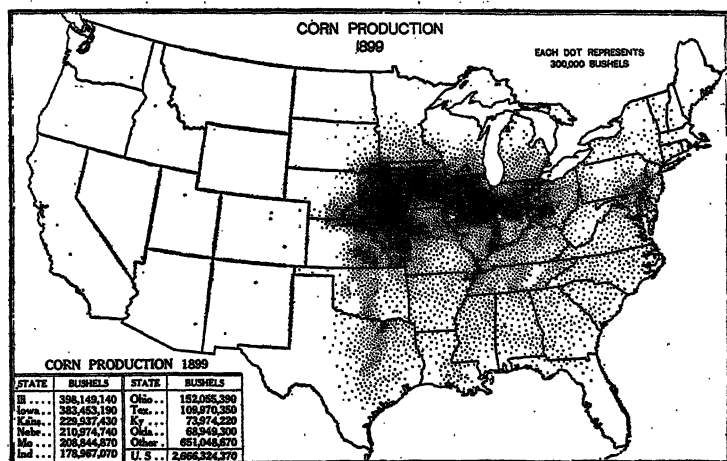


FIG. 10.—Corn production in 1899 had become more intense in several States, but especially in the Missouri River Valley. The Corn Belt had developed westward and northward. Total production in 1899, according to the census of 1900, was 2,666,824,370 bushels. The average production per person in the United States had increased from 26.7 bushels in 1859 to 35.1 in 1899.

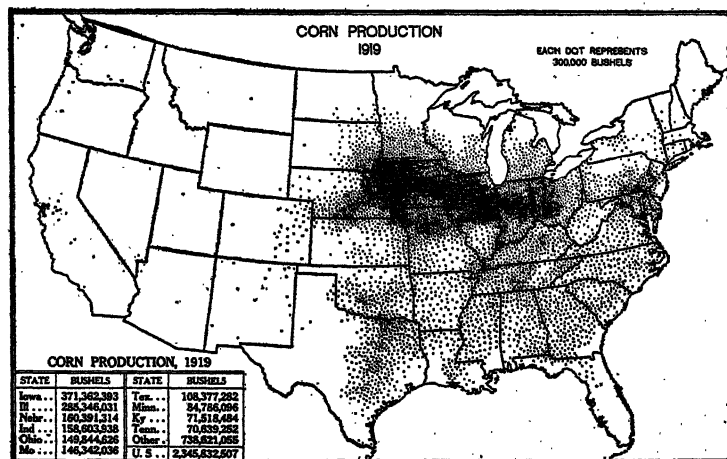


FIG. 11.—Corn production in 1919 amounted to 2,345,832,507 bushels. This is a reduction from the production of 1899. Corn cut for forage and silage increased very largely in this period, the acreage cut for forage, in 1919, being reported as 14,502,932 acres. Large decreases in production occurred in the Corn Belt, especially in Kansas, Illinois, Missouri, and Nebraska.

of the early settlers because (1) acclimated seed was available, (2) it furnished food for man and for animals, and (3) it was the most adaptable and best yielding crop for newly cleared land.

The westward movement of corn production began immediately after the close of the Revolutionary war. The rich lands of Tennessee, Kentucky, and the Northwest Territory were settled by immigrants from the seaboard, who raised corn and marketed it mostly in the form of whisky and livestock. These were the most important corn-producing areas in 1839 (Fig. 7), although the western frontier of corn-production had already crossed the Mississippi River.

A period of depression in the West following the panic of 1837 had ended by 1845. A period of prosperity and rapid development followed. Corn production more than doubled in the 20 years from 1839 to 1859 (Fig. 8). This was due to the rapid settlement of the prairie States, a large number of foreign immigrants coming to reenforce the strong western movement of our native population. Steel plows, first made about 1837, quickly came into use and facilitated the breaking of the prairies. The railroads by their rapid and extensive development aided this great western movement, carrying the pioneers westward and furnishing transportation for the products and supplies of the settlers. Exports of corn increased rapidly.

The Civil War retarded development during the sixties and less corn was reported in the census of 1869 than in 1859. Rapid expansion took place in the following years. The first crop to reach a billion bushels was in 1870, and no crop has been less than a billion bushels since 1874. Returning soldiers of the Civil War gave further impetus to the settlement of the prairies and improved machinery came into use. The acreage in corn increased from 44 million to 62 million acres in the 5 years from 1875 to 1880, and the average corn product per farm doubled in the decade 1869-1879. By 1879 the Corn Belt was rather well defined (Fig. 9).

Beginning with 1876 there was a very great increase in the exports of both corn and meat products. The decline in freight rates about this time favored the transportation of farm products from the Corn Belt. The methods of culture in the West improved as the machinery improved, and as land

values rose more intensive cultivation was encouraged. Corn breeders developed improved varieties, the growing of which increased the yields. The limits of the Corn Belt were extended and corn was pushed somewhat farther into new territory. Acreage in 1899 was one-half larger than in 1879, although production increased only one-third, owing to lower acre yield in 1899 (Fig. 10).

The acreage of corn in Oklahoma increased more than 3 million acres in the decade from 1899 to 1909. This increased acreage did not prove to be permanent, however, and in 1919 the acreage of corn was about the same and the production less than in 1899, while wheat increased over 3½ million acres in the State from 1899 to 1919. The demand and guaranteed price for wheat during and immediately following the World War and the scarcity of labor resulted in marked increases in the wheat acreage and decreases in corn acreage in many other States. The full effect of this tendency was felt in 1919 (Fig. 11).

In the period from 1899 to 1919 some adjustments were made in corn acreage, land less well suited to corn going to other crops; better cultural methods and better seed have gradually been coming into use. These changes are evidenced by the acre yield, which increased from an average of 24.1 bushels in the period 1890 to 1899 to 26.1 bushels in the period 1910 to 1919. The various agricultural colleges and experiment stations and the U. S. Department of Agriculture have done much in recent years to maintain and to increase the yield of corn per acre.

### The Corn Belt.

As corn growing developed in the United States it was learned by experience that corn could be grown in some areas to better advantage than in others. Acreage soon became largest and production most intense in the more favorable areas. A rather indefinite strip of land, varying from time to time, extending from southwestern Ohio to southeastern South Dakota, and thence southward along the Missouri River, developed corn growing most intensively and has become known commonly as the "Corn Belt." In some places the limits of the belt are more or less definite, as in southern Illinois, where there is an abrupt change in soil type which traces back to the glacial period. In other

places the limits are indefinite, particularly toward the north and west where climatic conditions with their delicate shadings from year to year determine the final result.

The Corn Belt in general, except the eastern portion, is prairie or bottom land, fertile, easily worked, and well-drained. In the early days much of it was swampy, marshy land without trees, but covered with abundant growth of grassy and herbaceous plants. Other sections, though not marshy, were covered with heavy grass. The draining of the marshes and the breaking of the heavy prairie sod were difficult tasks for the early settlers. Once accomplished, however, immense corn fields easily worked and very productive were rapidly developed.

### Crop Combinations in the Corn Belt.

The world bids high enough for pork, corn-fed beef, and other corn products to make corn pay better in general than any other crop that can be produced in the Corn Belt. Yet, less than half of the corn land in the Corn Belt is allotted to corn in any given season. Over 50 per cent of the crop land is occupied by small grains and hay, whereas intertilled crops other than corn are allotted less than 1 per cent. This is due to the fact that the corn crop leaves men and

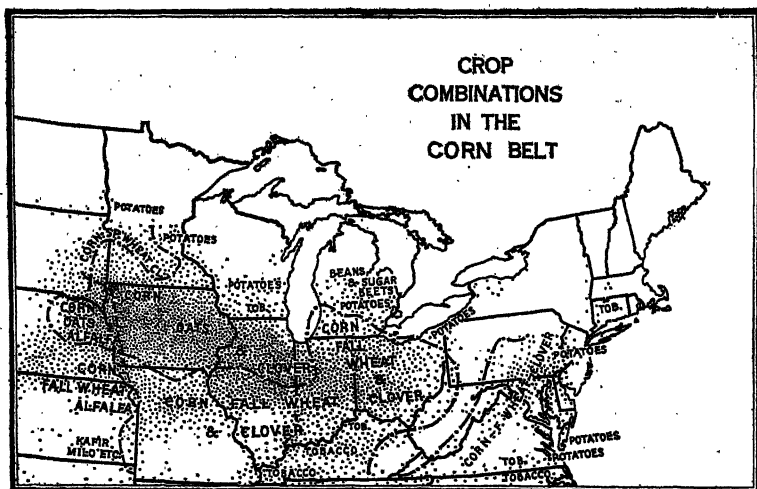
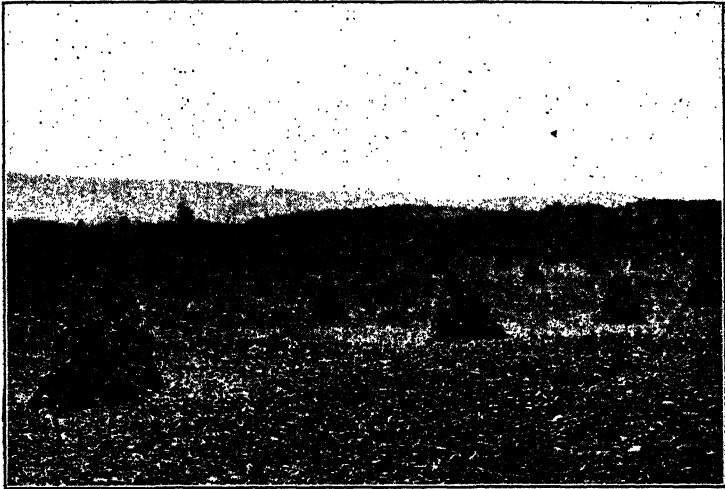


FIG. 12.—Crop combinations in the Corn Belt. The dots indicate corn acreage. The broken lines mark off the regions of crop combinations. Intertilled crops other than corn find their place for the most part outside of the true Corn Belt.



Fodder in the Shock.

FIG. 13.—Corn cut and shocked in preparation for sowing winter wheat. A practice common in East Central States.

teams free at times in the year when they can be employed to advantage in seeding and harvesting small grain and hay, but employs them at times when it is necessary to plant, till, and harvest other intertilled crops like kafir, tobacco, beans, and potatoes. Besides being supplementary to corn, from the standpoint of providing employment to men and teams at certain times of the year, small grain and tame hay and pasture grasses supplement corn in feeding livestock and maintaining soil fertility.

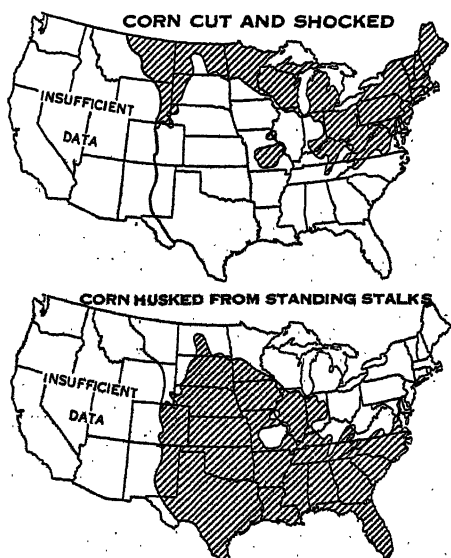
The accompanying map (Fig. 12) shows that the principal crop combinations in the Corn Belt result from differences in the choice of small grains and hays, and not from differences in the choice of intertilled crops. In the northern part of the Corn Belt, from northeastern Nebraska to northwestern Indiana, the principal small grain is oats, whereas along the southern margin and in the eastern end it is winter (fall) wheat.

Temperature and soil conditions are important factors in determining the choice between these two crops. Crossing these two small-grain divisions of the Corn Belt in the vicinity of Sioux City, Iowa, Omaha, Nebr., and Kansas City, Mo., there is a line largely determined by moisture conditions, to

the west of which the principal hay is alfalfa, and to the east of which it is clover and timothy. Thus, with corn practically excluding other intertilled crops from the Corn Belt, and with soil and climatic conditions markedly influencing the choice of small grain and hay crops, the principal crop combinations in the Corn Belt are (1) corn, spring oats, and clover and timothy; (2) corn, winter wheat, and clover and timothy; (3) corn, spring oats, and alfalfa; and (4) corn, winter wheat, and alfalfa.

### Handling the Crop.

Farm practices in handling the mature corn crop vary in different sections of the country. In the northern and northeastern States and in mountain areas cutting and shocking is the usual practice. In other sections it is more usual to gather the ripened grain from the standing stalk. The sections where these different practices are followed on the majority of the farms are shown in Figure 14.



Methods of Harvesting Corn.

FIG. 14.—The shaded portions of the two maps show the sections of the United States where cutting and shocking corn (above) and gathering it from standing stalks (below) are the more common practices. "Husked" is used in the figure, although in the South corn is often only "jerked."

In the Corn Belt the greatest part of the corn is husked from the standing stalks. Other fields are harvested by live stock turned in to feed. A larger proportion of the corn, however, is now being cut, either for silage or for fodder (fodder), than formerly was the case. The percentage of the total corn acreage cut for silage in the different sections of the country is shown in Figure 15 and the percentage cut for fodder in Figure 16. The corn harvester (Fig. 17), the

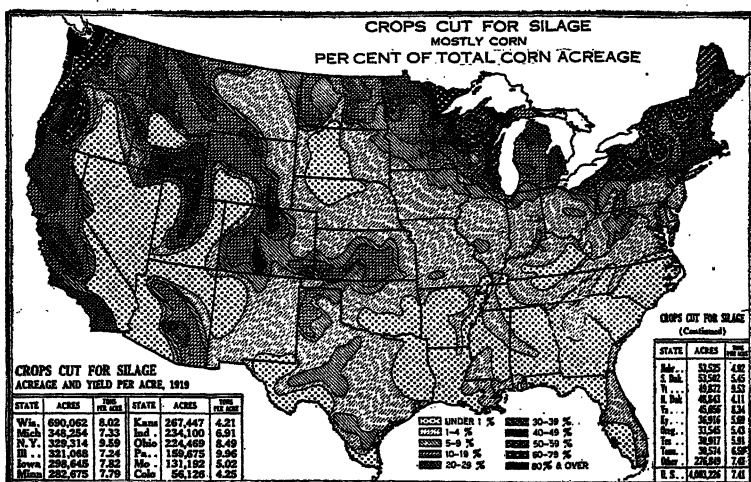


FIG. 15.—A large portion of the corn crop is used for silage north of the limits of heavy grain production and in mountain sections. The acreage harvested for grain is comparatively small in these areas and corn is grown principally for making silage to feed dairy cattle.

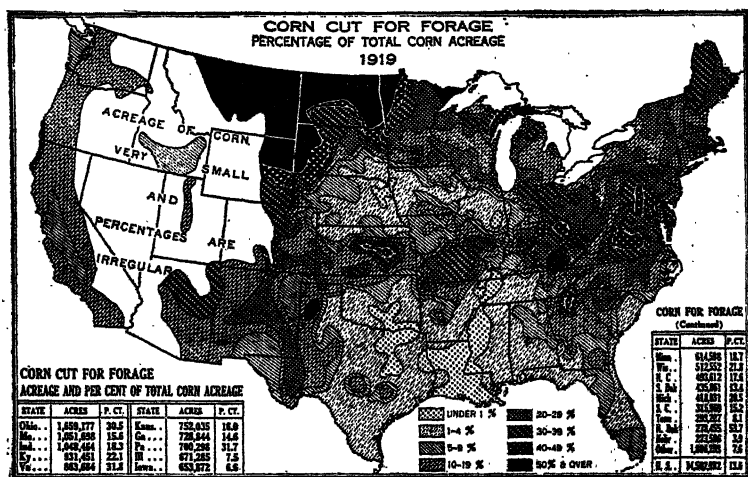
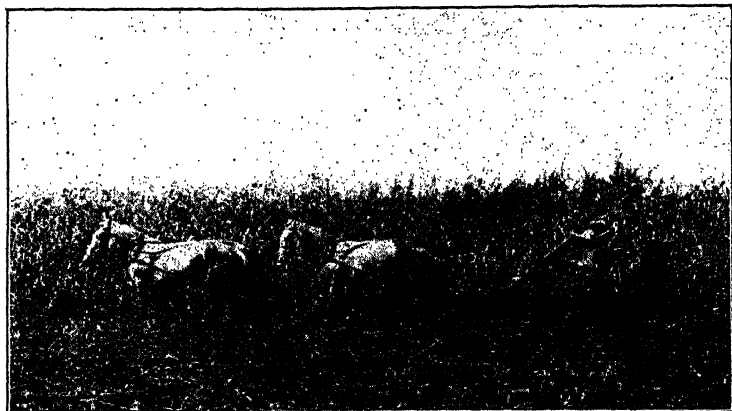


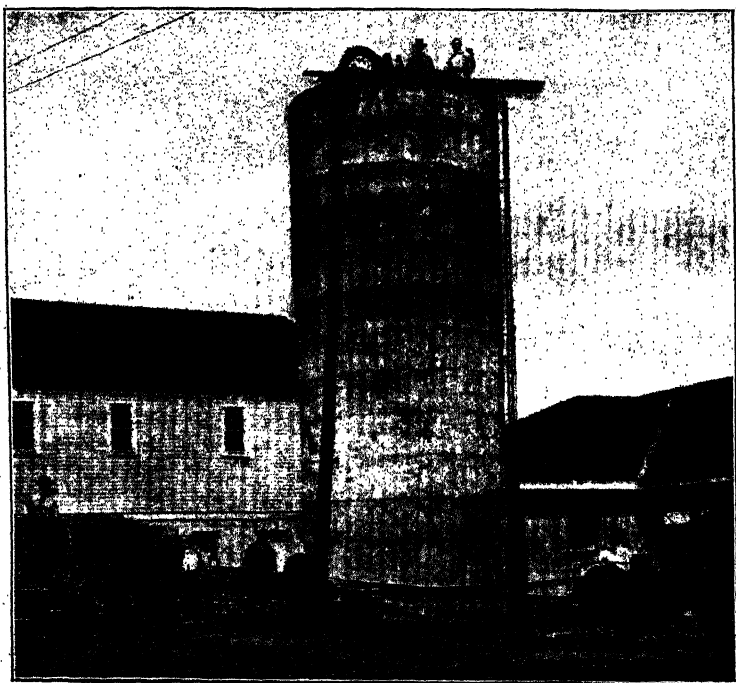
FIG. 16.—The cutting and shocking of corn for forage or fodder is the common practice in the dairy States of the North and in Ohio, northeastern Kentucky, West Virginia, and most of Virginia and Maryland, also in the eastern Ozark region of Missouri. Corn is cut in September, cutting being general between September 10 and 30.





Cutting Corn.

FIG. 17.—A corn harvester at work. More corn is being cut now than formerly both for silage and for fodder.



Filling the Silo.

FIG. 18.—The first silos are reported to have been built in Michigan in 1875. Since then the number has increased rapidly in the dairy regions. Silage is also being used to some extent in feeding beef cattle and other live stock.

shredder, and the silage cutter (Fig. 18) are being more extensively used. This is more expensive than "hogging down," which practice is also becoming more common, but better use is made of the crop when it is cut, especially if made into silage or if the stover is shredded.

The cutting of corn for forage or fodder is in general a comparatively more important practice in mountain sections and other areas on the outskirts of corn production. An important exception is found in the east-central States where corn is cut and shocked in preparation for winter wheat. In these areas general farming is practiced with live stock as an important side line. Fodder takes the place of hay that otherwise would need to be grown.

### Environmental Factors.

The amount of corn produced in the United States in any year is determined by two things, (1) the acreage planted, and (2) the acre yield. The acreage planted is determined by the farmers, but the acre yield is determined by environmental factors, the most important of which have to do with the soil, the weather, and with insects and diseases.

#### Soils.

For highest and most profitable yields corn requires a fertile, well-drained, loamy soil well supplied with humus that can be easily worked with labor-saving machinery. Conditions such as these make the Corn Belt what it is. Corn is produced on many soil types ranging from sand to heavy clay, but the yields and the profits from the crop have a close relation to the quality and conditions of the soil. As soils are farmed from year to year their natural fertility gradually becomes less and manure or other fertilizers must be added in order to maintain crop yields. The use of fertilizers, formerly confined to the eastern and southern States, is increasing in the Corn Belt, as profits from their use become apparent.

#### Climatic Factors.

The most important climatic factors that determine production and yield of corn are rainfall and length and temperature of the growing season. Corn growing is limited toward the north by the short growing season, which is under 120 days in the average year along the Canadian border

(Fig. 19). Along the Gulf it is 240 days or over. Most of the Corn Belt has an average growing season of 150 to 180 days. Comparatively little corn is grown for grain where the season is less than 140 days. Reduction in the length of the season, especially toward the north, caused by late spring or early fall frosts, or by unfavorable weather at planting time, tends to reduce total production and acre yields and to

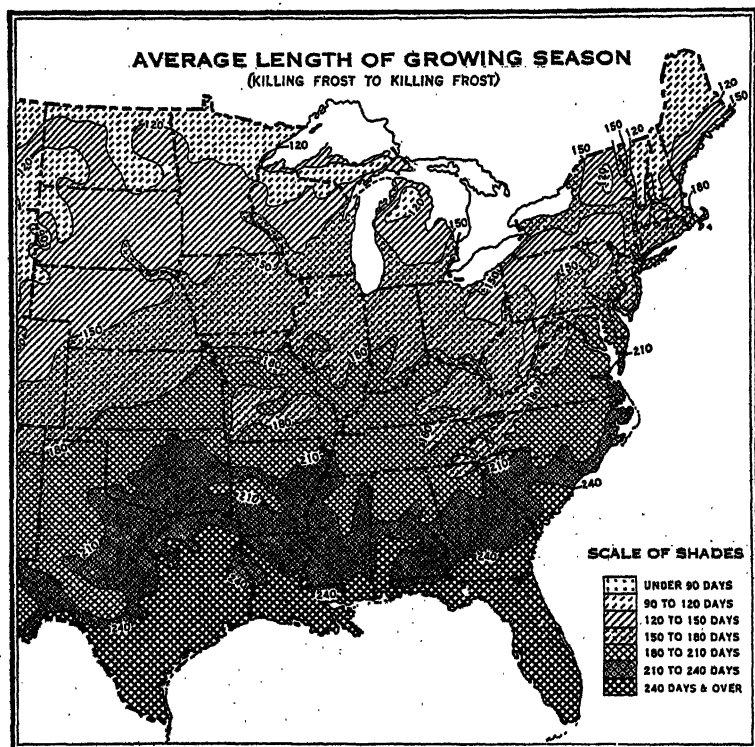


FIG. 19.—The average length of growing season, that is, the average number of days from the last killing frost in the spring to the first killing frost in the fall, increases from north to south and decreases with elevation. Nearly all of the corn crop is grown where the season is over 145 days.

lower the quality of the crop. In some years the amount of merchantable corn is very much reduced, especially toward the northern limit of corn growing and even well into the Corn Belt, by early frosts in the fall. Frost in the early fall is especially destructive to a crop that has been planted late or has been held back by unfavorable growing conditions. This again is of increasing importance from south to north.

Varieties of corn differ widely in the length of growing season required. Some of the southern varieties require as much as 180 days from planting to maturity. Some of those grown in the north will mature in less than 90 days. Efforts are being made continually to develop strains that mature in a shorter season in order that corn growing may be pushed farther northward.



FIG. 20.—Corn planting begins in the usual year before February 1 in extreme southern Texas, and at progressively later dates toward the north. It begins in the heart of the Corn Belt about May 1. Near the northern limits of corn production planting does not begin until about the middle of May.

Corn requires high temperatures both night and day during the growing season. Practically no corn is grown where the mean summer temperature is less than 66° F., or where the average night temperature during the three summer months falls below 55° F. Consequently, the production of corn along the northern border of the United States and at the higher elevations in the West is negligible.

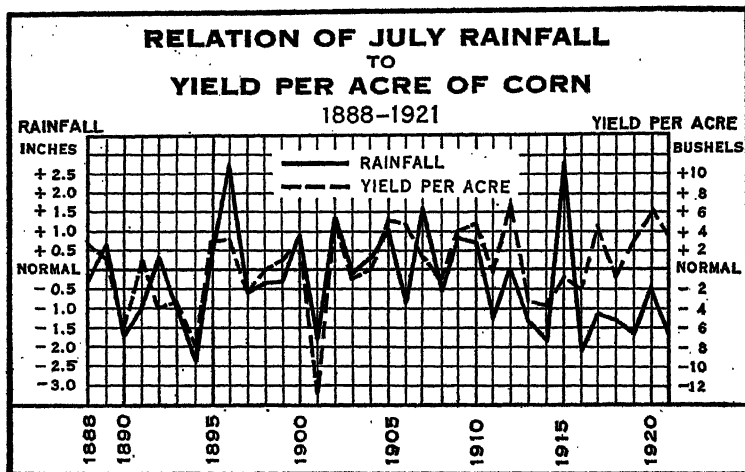


FIG. 21.—The effect of rainfall for the month of July alone on the average yield of corn in Indiana, Illinois, Iowa, and Missouri, of each year from 1888 to 1921, inclusive, is very marked, showing a close relation.

#### Time of Planting.

Corn planting begins in the usual year (Fig. 20) before February 1 in extreme southern Texas and at progressively later dates toward the north. The northward advance is at an average rate of 13 miles a day, until by May 1 it has begun generally in central Nebraska, north-central Illinois, and central Ohio. During the next 10 days corn planting begins in practically all regions where it is grown northward to the Canadian line. Throughout the Corn Belt planting is general about May 15, and is completed usually by June 1. In New York and northern and eastern Wisconsin it is general the last week in May. In any locality corn planting may continue for two weeks or longer. In the South there is often a second, or late planting, usually in June, after the planting and chopping out of cotton is completed.

#### Rainfall.

Toward the west corn growing is limited first by low rainfall and secondly by short seasons due to high altitude. Very little corn is grown west of the line of 8-inch mean summer rainfall. The acre yield in any locality is also determined to a large extent both by the amount and by the distribution of rain in the growing season. It has been found by studying yields of corn and the rainfall for

many years that there is a close relation between rainfall in July and yield of corn. This relation for the principal corn States is shown in Figure 21.

#### Diseases of Corn.

The most destructive and widespread diseases of corn in the United States are common smut and the root, stalk, and ear rots. Other diseases such as head smut, Stewart's disease, and the brown spot disease are sometimes locally important, but the losses caused by them are comparatively negligible.

Common smut is caused by a parasitic fungus (*Ustilago zeae*). It is one of the most destructive and widely distributed of cereal diseases. (See Fig. 22.) The heaviest losses are experienced in the semiarid sections of the Great Plains, where the disease is reported to be increasing in severity. The estimated losses caused by this smut in the United States during the 4-year period, 1917 to 1920, averaged about 80 million bushels annually, or nearly 3 per cent of the average crop.

No practical method of controlling corn smut has been discovered. The most promising outlook along this line lies in the development of productive, smut-resistant strains.

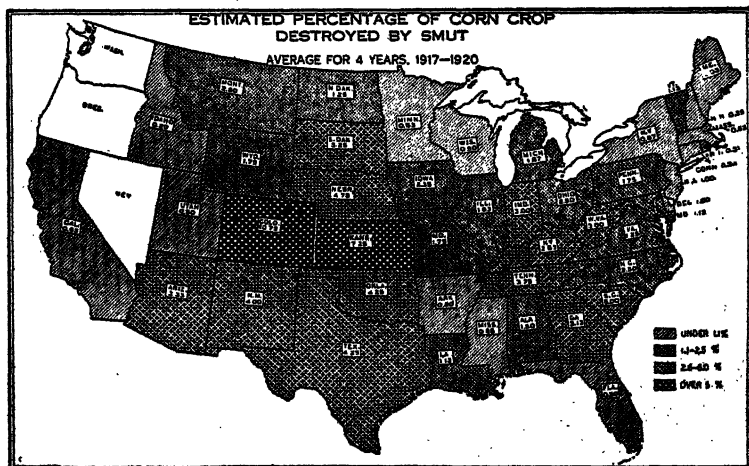


FIG. 22.—Corn smut destroyed an average of about 80 million bushels of corn annually from 1917 to 1920, according to estimates made by the Plant Disease Survey of the U. S. Department of Agriculture, based on reports received from collaborators in the different States. Losses are heaviest in the darker areas.

The principal causes of the root, stalk, and ear rots of corn are a combination of (1) certain parasitic fungi, such as *Fusarium*, *Diplodia*, and the organism that also causes wheat scab; and (2) unfavorable soil conditions resulting in metallic poisoning of the corn plants. The conditions favoring the development of these rots are found throughout the entire Corn Belt, but the damage is most pronounced in Indiana, Illinois, and Iowa, especially in sections where the soil is deficient in calcium and phosphorus. These corn rots result in seedling blight, stunting, leaning and down stalks, poor root systems, barrenness, chlorotic leaves, broken ear shanks, various types of leaf spotting and firing, and generally reduced yields.

The estimated losses from the root, stalk, and ear rots of corn in the United States for the four years 1918 to 1921, inclusive, averaged about 122 million bushels annually, or over 4 per cent of the average crop.

The corn rots can not be controlled by seed treatment. A certain degree of prevention is possible by carefully selecting seed ears in the field from plants showing no symptoms of disease, and testing each ear for germination and disease. These measures, combined with a rotation of crops in which corn does not follow corn or wheat, and building up and maintaining the fertility of the soil by proper practices, especially the addition of lime and phosphorus where necessary, will assist in controlling these diseases.

#### **Insect Enemies of Corn.**

The principal insect enemies of corn in the Corn Belt and Mississippi Basin States are the chinch bug, the corn-ear worm, white grubs, the corn-root aphid, and, in the river bottoms, billbugs. Grasshoppers also are occasionally injurious throughout these regions, especially in the States west of the Mississippi River. Doubtless the corn-ear worm is the most constantly injurious of these insects. It has been determined that this pest where abundant causes a loss of at least 7 per cent of the grain on the ears attacked. Chinch bugs are most likely to injure corn during seasons of comparative drought. The States most liable to serious invasion are Ohio, Indiana, Illinois, Missouri, Kansas, Oklahoma, and Texas, although this pest occurs throughout nearly all the corn-producing States of the Union.

In the South Atlantic States, the larger cornstalk borer, the southern corn-root worm, and the corn-ear worm are all seriously injurious, and all of them often may be found invading the same fields. As the corn-ear worm has several generations annually in this region, it is even more injurious here than in the Western States. This insect has caused infinitely greater losses to the corn crop in recent years than the European corn borer, although the wide publicity afforded the latter insect might lead the public to suppose otherwise.

The European corn borer, a native of southern Europe, was discovered in eastern Massachusetts in 1917. It is now

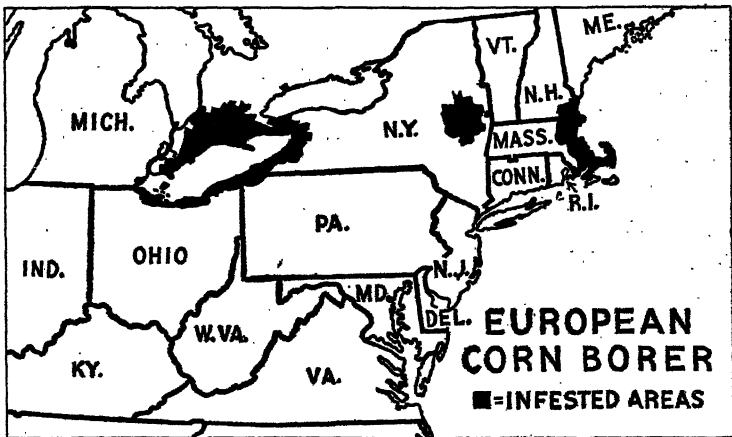


FIG. 23.—The European corn borer is known to be present in the blackened area.

known to be present as far west as the western end of Lake Erie, as shown by the accompanying map (Fig. 23). As yet it has become seriously injurious only in eastern Massachusetts and southern Ontario, Canada. It is feared that it may become a very serious enemy of corn when it reaches the Corn Belt. In Massachusetts this insect has destroyed at least 12 per cent of the corn in the most heavily infested areas. Its work in northern Ohio and southeastern Michigan is yet so trivial as to be imperceptible, and several years may elapse before corn growers in these States begin to feel its presence. Efforts are being made by the Department of Agriculture to prevent the pest from being carried farther westward.



### Cost of Production.

To say that the cost of producing corn is 60 cents a bushel, 75 cents, a dollar, or any other sum, and to compare that sum with the prevailing price, which is always fluctuating more or less, is to tell only a small part of a long story, so small a part, in fact, that it is hardly worth the telling. The chief interest centers about the size and proportions of the several items that enter into the final figure. For it is a thorough working knowledge of what the items are, how and why they change year after year, and the probable effect of changes in the items on the financial results of the season's work, which can and does serve the very useful purpose of guiding production. It is one thing to know how to grow corn when only physical conditions need be considered. It is quite another thing to produce corn at a profit when wage rates, prices of materials, rents, and probable prices affect the results in addition to the usual physical conditions. The problem is complex. In the absence of written records it is easy to become confused as to some of the circumstances involved in past operations. The memory does not always serve with sufficient accuracy when sound reasons for decisions are needed.

In the following discussion the final result has been developed by bringing together the details as found. In the several sets of conditions the costs of producing corn add up to more than the effective farm price. They always do on a great number of farms when things are allowed to take their own course. Producers have very little control over the price they will receive, but they can usually forecast roughly what that price is likely to be. Their financial success, therefore, depends largely on their success in making the adjustments of means to the end—in the exercise of good judgment as well as good practice.

### Working Standards.

By setting up a definite result to work toward farmers can do a great deal toward adjusting costs to probable prices. This means establishing a working standard and following it closely, comparing progress with one's own standard and the standards of other farmers at frequent intervals.

For want of a better working standard, the average results of a number of farmers may be used. Since many farmers do better than the average, such a standard should be

within the reach of all farmers. It is not a standard in the sense that it is the best possible practice, nor one that should be adhered to indefinitely, as will be admitted when it is recalled that the average farmer gets little more for his own efforts than he pays his hired men. It is standard in the sense that equally good results may reasonably be expected wherever its conditions are met. There are, of course, different standards in the several producing areas. What is good practice in New England would bring poor results in the Corn Belt. And even in the Corn Belt there are marked differences in what is held to be good practice in the differ-

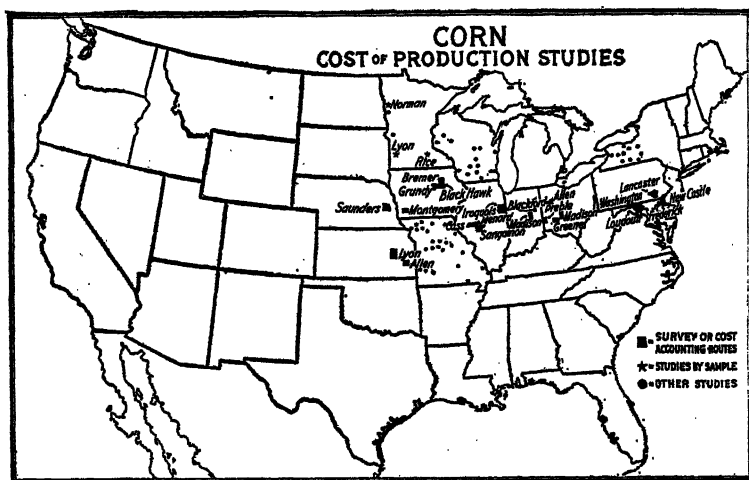


FIG. 24.—The cost of producing the 1917 corn crop was studied by the Office of Farm Management and Farm Economics in the areas indicated on this map.

ent sections. These differences are compensated for to some extent by different prices and different cost rates.

A study of the cost of producing the corn crop of 1917 was made by members of the staff of the Office of Farm Management and Farm Economics from the records of 253 farmers in 12 representative areas in the principal corn-growing regions of the country. (See Fig. 24.) The data so obtained have been used as a tentative working standard and with this as a base, the cost of producing corn in 1921 has been computed. The main differences between the two years are in the price of corn and in the rates prevailing for the several items of cost. Due consideration was given to the

changes in these rates, item by item, and all were diligently compared in the light of the best available current data. The results, therefore, while somewhat lacking in accuracy of detail, present a picture which is essentially true. These results are shown graphically, for each of the 12 areas studied, in Figure 25.

#### Variations in Costs of Producing Corn.

The cost of producing an acre of corn varies from farm to farm and from State to State. There are even greater differences in the costs in different regions of the United States. These differences are due in part to different practices. For example, the cost of producing corn that is harvested by husking from standing stalks is less in every State for which we have data than the cost in the States in which the corn is customarily cut and husked from the shock. There are other factors, such as larger and leveler fields, the use of larger machinery and larger teams which make differences in cost. The horse labor requirements per acre do not vary as much as the man labor requirements, yet there are some striking differences in the former. In Indiana, for example, the horse labor requirements are very much greater than in Nebraska.

The use cost of land (rent, or interest on land value), averaging \$11.90 per acre, is the largest item in the cost of producing corn in the Middle Western States. In several States it is nearly as large an item as all other items combined. In the Eastern States for which we have data the use cost of land is a very much smaller proportion of the total cost. Labor and other miscellaneous costs are much greater in these States than in the Western States, whereas the use cost of land is less than in the Western States. The excess of miscellaneous costs in the East is to some extent offset by the larger value of the stover used for feeding purposes as compared with the value of stalks for pasture. The values of the stalks in the one case, and the stover in the other, are credited against costs and are shown in Figure 25.

The values of cost factors are used in making the above comparisons because it is impossible to add together the physical units of the factors used in producing the corn. The differences are, therefore, due in part to differences in the costs of units or wages paid for labor. The lower part

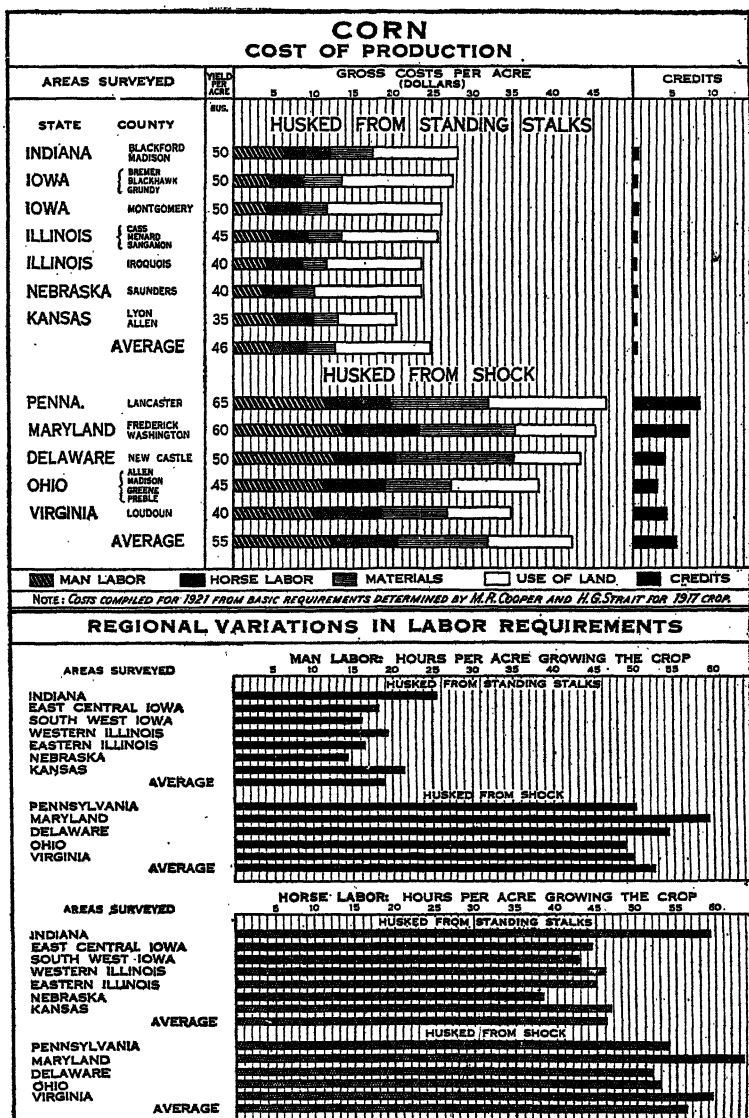


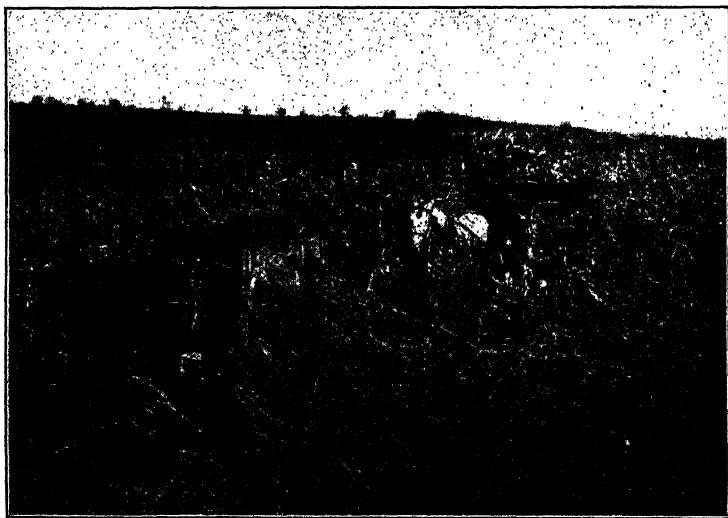
FIG. 25.—Cost of producing corn varies with the method of harvesting and with the different conditions found in different States. It costs more to harvest corn by cutting it and husking from the shock than to husk it from the standing stalks.

The man labor required per acre in growing corn varies. In Indiana it is much greater than in Nebraska, and in Maryland much greater than in Indiana. Comparing the Eastern and the Western States horse labor does not vary as much as man labor.

of Figure 25 shows the variations in man labor and horse labor in hours per acre and demonstrates that the differences in costs are very largely due to differences in labor and units of other factors used in producing the crop.

#### Trend of Costs.

Cost factors involved in the production of corn may change from year to year. The general movement of costs from 1910 to 1921 is indicated in Figure 27. The wages paid to hired men indicate the movement of labor costs during the period.



Husking Corn from the Stalk.

FIG. 26.—A less expensive method than cutting and later husking from the shock, but the value of the stover from cut corn is greater than that of stalks left in the field.

The prices of articles farmers buy, as reported in the *Monthly Crop Reporter* (now *Weather, Crops, and Markets*) each year indicate the movement of other costs. From 1910 to 1914 there were only slight changes in the costs of the factors of production. From 1914 to 1920 costs rose rapidly and to a very high point. Wages rose less rapidly than other costs. It may be noted that the price of corn fluctuates much more than wages or prices of articles farmers buy. From 1915 to 1919 the price of corn rose relatively more rapidly than costs, but costs continued to rise for a year after the price of corn had begun to decline. Costs began to decline a year after

the decline in the price of corn and have not fallen in proportion to the price of corn. On December 1, 1921, wages, price of farm machinery, and other things were still high relative to the price of corn.

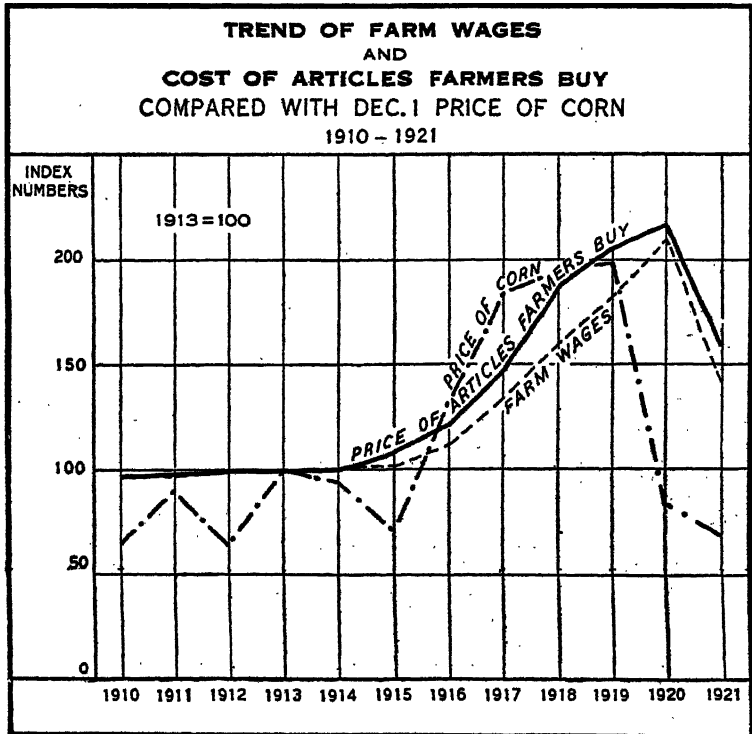


FIG. 27.—The prices and wages are averages for Ohio, Indiana, Illinois, Iowa, Missouri, Nebraska, and Kansas—the Corn Belt States. The price of corn fluctuates more than wages and other costs, and on December 1, 1921, was far below the level of farm wages and prices of things farmers buy.

### Estimating Costs.

For the convenience of farmers in estimating costs and returns the details and prices used in computing the costs of corn husked from the standing stalk are given, together with columns in which anyone may work out his own costs by substituting his own details for 1921 for the average figures and note what he may reasonably expect for 1922. As the season progresses, by comparing the rates he is obliged to pay with those he has paid he can estimate beforehand with some confidence the results of the season's operations.

194 *Yearbook of the Department of Agriculture, 1921.*

*An example for computing the cost of producing corn (husked from the standing stalk).*

| Item.   | Tentative working standard: Averages 1921—Indiana, Illinois, Iowa, Nebraska, and Kansas. |        |        | Your farm, 1921. |        |       | Your farm, 1922. |        |       |
|---|--|--------|--------|------------------|--------|-------|------------------|--------|-------|
|   | Amount.  | Price. | Cost.  | Amount.          | Price. | Cost. | Amount.          | Price. | Cost. |
| Acres of corn per farm.   | 67 acres.....  |        |        |                  |        |       |                  |        |       |
| Production per farm.  | 3,000 bushels.....   |        |        |                  |        |       |                  |        |       |
| Yield per acre.....   | 46 bushels.....  |        |        |                  |        |       |                  |        |       |
| Man labor <sup>1</sup> (\$40 to \$50 per month and board).              | 19 hours.....  | \$0.25 | \$4.75 |                  |        |       |                  |        |       |
| Horse labor.....  | 46.2 hours.....  | .10    | 4.62   |                  |        |       |                  |        |       |
| Seed.....   | 0.14 bushel.....   | 1.35   | .19    |                  |        |       |                  |        |       |
| Manure.....   | 0.85 load.....   | 1.50   | 1.28   |                  |        |       |                  |        |       |
| Commercial fertilizer.  |  |        |        |                  |        |       |                  |        |       |
| Use of equipment...   | 25.3 hours.....  | .05    | 1.27   |                  |        |       |                  |        |       |
| General farm expense (9 per cent of labor and materials).               |  |        | .98    |                  |        |       |                  |        |       |
| Total operating cost per acre.  |  |        | 13.09  |                  |        |       |                  |        |       |
| Credit for stalks as feed.  |  |        | .73    |                  |        |       |                  |        |       |
| Net operating cost per acre.  |  |        | 12.36  |                  |        |       |                  |        |       |
| Operating cost per bushel (\$12.36÷46 bushels).                         |  |        | .269   |                  |        |       |                  |        |       |
| Use cost of land per acre (rent or interest on \$255 at 4.67 per cent). |  |        | 11.90  |                  |        |       |                  |        |       |
| Cost per acre.....  |  |        | 24.26  |                  |        |       |                  |        |       |
| Cost per bushel, including rent (\$24.26÷46 bushels).                   |  |        | .53    |                  |        |       |                  |        |       |

NOTE.—Cost of hauling to market is 3 to 4 cents per bushel.

<sup>1</sup> In case corn is cut with a binder and husked from the shock the man labor will be increased approximately 2½ hours and the horse labor decreased 2½ hours from the above figures. Three pounds of twine costing 50 cents and the machine charge of approximately 50 cents must also be added, making a total additional cost of approximately \$1.50 per acre, which is largely offset by the increase in the value of stalks as feed.

### Markets and Marketing.

The farmer who grows corn is concerned, first, with the successful production of the crop, and, second, with marketing the crop profitably. He is vitally interested in the price received for his corn and other produce, for on this the profits from all his farm operations depend.

In the following pages facts concerning the commercial movement of corn and some of the factors that influence and determine corn prices are discussed. The subjects considered are: (1) Quality and grading of corn, (2) surplus and deficiency of corn in different areas, (3) monthly marketings of corn, (4) moisture content and shrinkage in storage, (5) exports and imports of the United States and Argentina, and (6) freight rates.

### Quality and Grading of Corn.

In the commercial channels of distribution, corn is practically always bought and sold by grade. The United States Grain Standards Act requires that in all interstate dealings in which corn is bought or sold by grades, the grades used shall be those established and promulgated by the Secretary of Agriculture. At country points the buyer determines the grade, but at the large terminal markets corn is graded by inspectors licensed by the United States Department of Agriculture, but employed usually either by the State or by the grain exchanges located in such markets. There were about 440 licensed inspectors in 1921.

The Federal grades for corn are based on factors of condition and quality. The best corn is graded No. 1 and corn decreasingly inferior is given numerical grades down to and including No. 6. Sample grade is corn too poor to meet the requirements of the numbered grades.

The receipts of corn at six of the principal markets in the corn-belt States, in the 4-year period, July 1, 1917, to June 30, 1921, grouped according to the grading by the inspectors are shown in Figure 28. The quantity of corn graded on arrival at these six markets during this period averaged 200,856,000 bushels yearly.

The price paid for corn is determined to a large extent by its grade, which is another way of saying that prices



bear a close relation to quality. Prices fluctuate from day to day for any one grade, and different prices are paid for different grades. This is illustrated in Figure 29, which shows the prices for yellow corn at Chicago for the crop year 1920. The differences between the prices of the lower grades and the price of No. 2—the basic or contract grade in the Chicago market—are seen to vary considerably from time to time. The prices of the lower grades were farthest

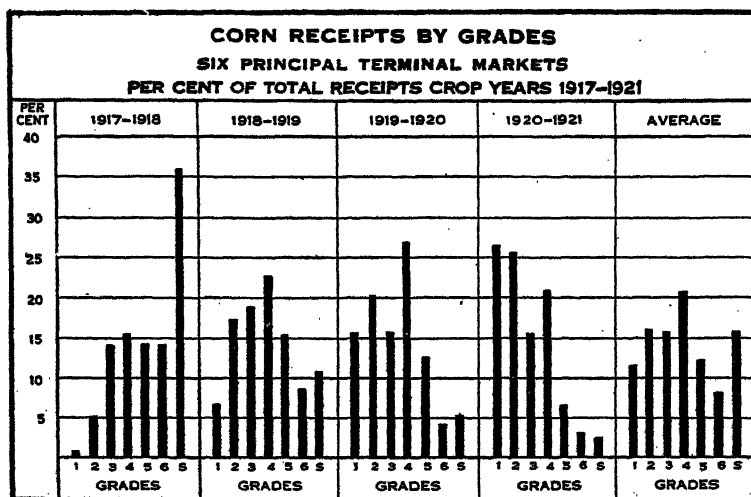


FIG. 28.—Percentage of receipts at six principal terminal markets of the Corn Belt falling in different grades in the four crop-movement years, beginning November 1, 1917, and ending October 31, 1921. The six markets are Chicago, Omaha, Kansas City, St. Louis, Peoria, and Indianapolis.

under No. 2 in January, when No. 6 sold at an average price of 13 cents less than No. 2. The price of No. 1 grade is not shown, but for this period was usually about the same or slightly higher than No. 2. The smallest difference between prices paid for different grades in the period covered was in September, when No. 6 averaged only 3 cents less than No. 2. There are many reasons for these fluctuations and differences in price, based for the most part on considerations of supply and demand.

The quality of the total corn crop is indicated by the Federal grades assigned to that portion arriving at the principal markets. Quality of the total crop is also estimated by the

United States Department of Agriculture from reports received from farmers, grain dealers, and others. The percentages of the corn that was of merchantable quality in 35 crops produced in the years 1886 to 1921 are shown in Figure 30. By merchantable is meant corn of good enough quality to be salable, but not all merchantable corn is sold.

These estimates of the amount of merchantable corn in each crop agree very closely with the conclusions to be drawn from the grading records. Thus, the crop of 1917 was reported to have the lowest percentage of merchantable corn

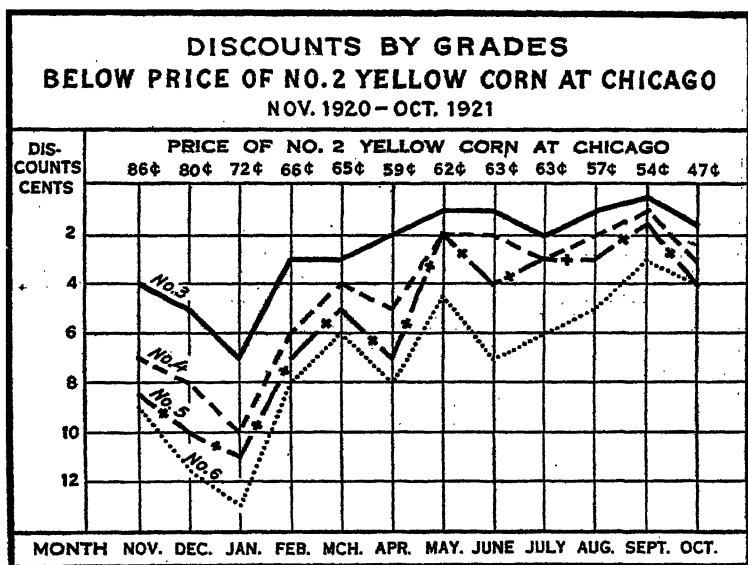


FIG. 29.—Monthly prices paid for No. 2 yellow corn of the 1920 crop arriving at Chicago, and discounts in cents per bushel for lower grades. Prices of No. 1 and No. 2 yellow corn were practically the same during this period, while other grades sold at lower prices.

of any crop in 35 years (Fig. 30). In agreement with this condition only a small amount of the receipts at the six markets graded Nos. 1 and 2, whereas over 35 per cent failed to meet the requirements for the numerical grades and had to be sold on the basis of sample grade (Fig. 28). On the other hand, a high quality is indicated for the crop of 1920 in the estimate of merchantable corn produced and accordingly most of the corn met the requirements for the higher grades; only 2.4 per cent of the receipts falling into sample grade.

The average production of merchantable corn in the United States for the ten years, 1911-1920, has been 2,232,-378,700 bushels annually, or four-fifths of the average total crop. In some unfavorable years the percentage merchantable has been very low, as in 1917; in other years it is high, as in 1906, when it was 89.1 per cent. In 17 different years out of 35 the percentage of merchantable corn in the crop has been 85 or over.

Iowa has led in bushels of merchantable corn produced during the ten years 1911-1920, but Nebraska has the dis-

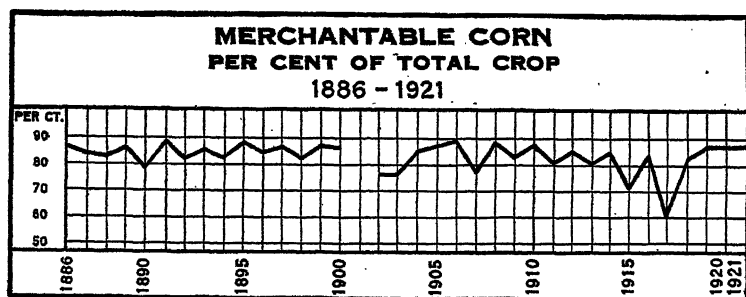


FIG. 30.—Estimates by the U. S. Department of Agriculture of the percentage of merchantable corn (corn good enough to sell) in the total United States crop, produced each year from 1886 to 1921, show that the quality varies from year to year.

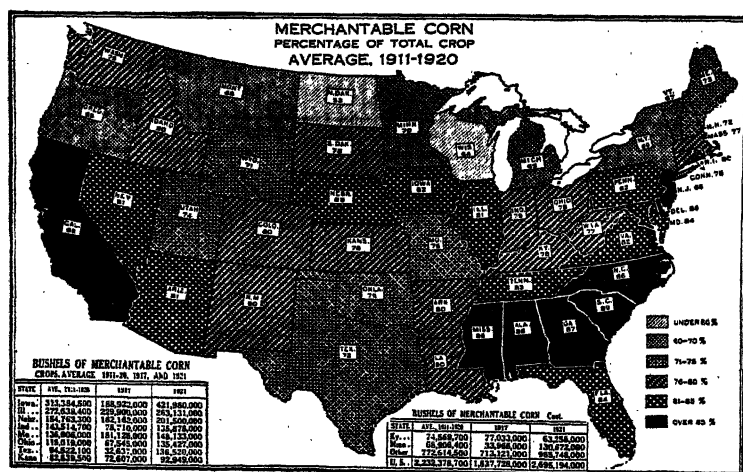


FIG. 31.—Average percentage of merchantable corn produced in all States, 1911-1920; and bushels of merchantable corn in the 1917 (poor quality crop), 1921 (good quality crop), and average, 1911-1920, crop, for the leading corn-producing States. Lighter shading indicates poorer quality.

inction, among the prominent corn States, of leading in the percentage of merchantable corn. Details regarding bushels and percentages of merchantable corn produced are given in Figure 31. In the northern tier of States east of the Rocky Mountains the percentage of merchantable corn is reduced very materially by early frosts in most years; thus the average in North Dakota is only 53 per cent.

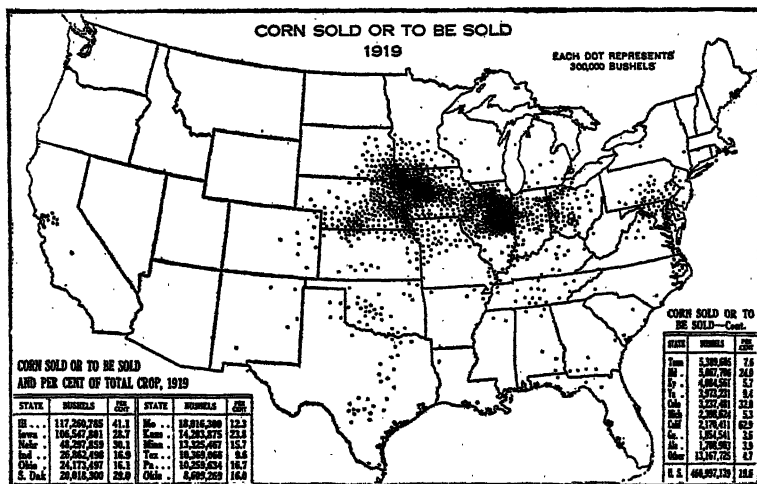


FIG. 32.—Two large and several smaller surplus-producing areas are indicated by these records from the census of 1920. The needs of manufacturers using corn and of deficiency areas are supplied principally from these sources.

### Surplus and Deficiency Areas.

By far the largest part of the corn crop is used on the farms where grown. This is shown by the facts that more than 85 per cent of the crop is fed to animals and that the States growing the most corn supply also a large percentage of the finished hogs and cattle.

There is, however, a considerable movement of corn from the farms producing it. This is shown in Figure 32, in which the corn sold or to be sold, as reported by the census of 1920, is represented by dots. Two areas reporting large corn sales are in evidence, one in the northeast quarter of Illinois, within a radius of about 150 miles of Chicago, and the other in northwestern Iowa and the adjoining portions of Nebraska and South Dakota, within a radius of about 150 miles

of Omaha. These are the large surplus corn producing areas. In these limited areas the system of farming is somewhat different from that practiced in other parts of the Corn Belt, a larger part of the corn being sold as grain and not in the form of live stock. In the Illinois area, especially, hogs and beef cattle are not plentiful.

In addition to this large commercial movement of corn from special surplus-producing areas, there is a limited

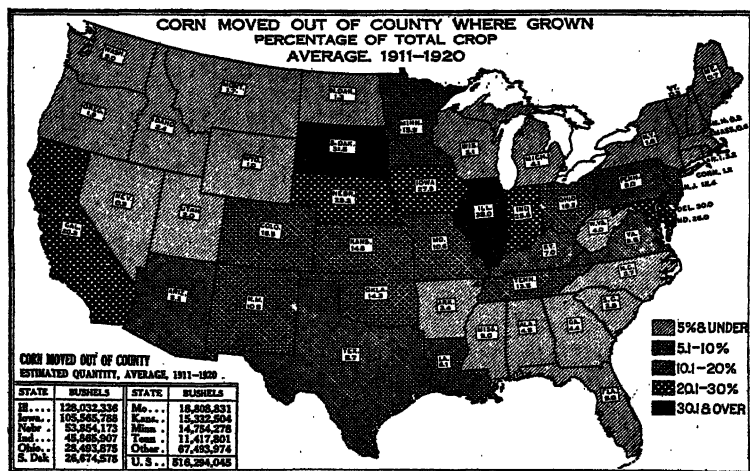


FIG. 33.—Estimates made by the U. S. Department of Agriculture for the 10-year period, 1911 to 1920, show an average movement of corn from the county where grown amounting to 38 per cent in Illinois and to almost nothing in States with small production. A movement out of the county does not necessarily mean a movement out of the State.

movement of corn in every State. This is shown in Figure 33, which illustrates by its different shadings the percentage of the crop moved out of the county where grown.

Although approximately one-fifth of the corn crop is shipped out of the county where grown, as an average for the United States, in most of the States the fraction varies widely from the average. This is practically a commercial movement and is strongest in the States that raise more corn than they consume, being 38 per cent in Illinois, 31.5 per cent in South Dakota, and over 25 per cent in Nebraska, Iowa, and Indiana. But even in the States that raise less corn than they consume, and into which corn is shipped from States that produce a surplus, there is a slight commercial movement of corn from farms.

The total amount of corn that moves out of the county where grown varies greatly in the United States in individual years. It was only about 150 million bushels for the crop of 1901, when the corn crop was a partial failure, but it has usually been between 400 million and 600 million bushels during the last 25 years. The average for the last five years has been over 500 million bushels.

### Monthly Marketings of Corn.

Corn begins to move from the farm to some extent as soon as it is harvested. In the Southern States considerable corn

AVERAGE PERCENTAGE OF YEARLY MOVEMENT OF CORN MARKETED EACH MONTH DURING THE 10-YEAR PERIOD FROM JULY 1, 1911 TO JUNE 30, 1921

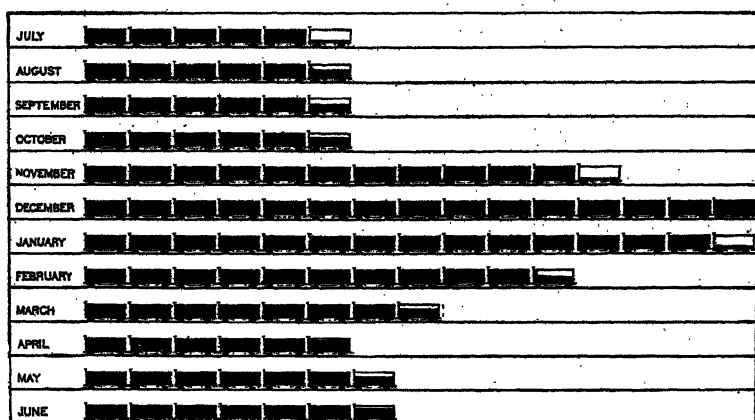


FIG. 34.—Reports received by the U. S. Department of Agriculture show that corn is marketed by farmers principally in the winter months. Each full car represents 1 per cent of the total yearly sales.

is harvested in September and October, but receipts in the market from this source are small. In the Corn Belt harvesting begins in October and about the 1st of November the movement of new corn becomes appreciable. The crop-movement year, therefore, is considered as beginning on November 1. About one-fifth of the total crop sooner or later leaves the farms where it grew. In Figure 34 the sales of corn each month by farmers are shown. Each full car represents 1 per cent of the total sales throughout the year, and the strings of cars opposite each month the sales for that month. The movement from the farm is largest

during the winter, more than one-half of the sales taking place during the four months, November, December, January and February. For the remainder of the year the monthly movement is fairly uniform, although slightly larger in the spring than in summer. For any one year the relative monthly marketings of corn may deviate considerably from the averages given.



Cribbing Corn.

FIG. 35.—Wagon dump, elevator, and corncrib used in the Corn Belt.

#### Moisture Content and Shrinkage in Storage.

Corn almost always contains some excess moisture at husking time, the amount varying from year to year and differing with locality. The moisture content is lower at husking time in southern grown corn than it is in corn grown farther north. In the crib this excess moisture gradually dries out, resulting in a loss of weight. Drying takes place most rapidly and shrinkage is greatest during the spring months. As this shrinkage progresses a higher price per bushel must be obtained in order to bring the same return.

Moisture tests on receipts from all parts of the country at three large terminal markets indicate that corn arriving in midsummer contains about 8 per cent less moisture than corn arriving in the midwinter preceding (Fig. 36). In experiments conducted in Central Illinois the shrinkage from

harvest to the following August averaged 16.61 per cent for 9 years. In connection with these experiments, comparison of the price per bushel, necessary to compensate for shrinkage, with the 10-year, 1904-1913, average Chicago price of No. 2 corn, showed "that there is no month after November for which the price increases sufficiently to compensate for shrinkage. In fact, the price decreases until January. If, however, January or February is taken as a base, prices

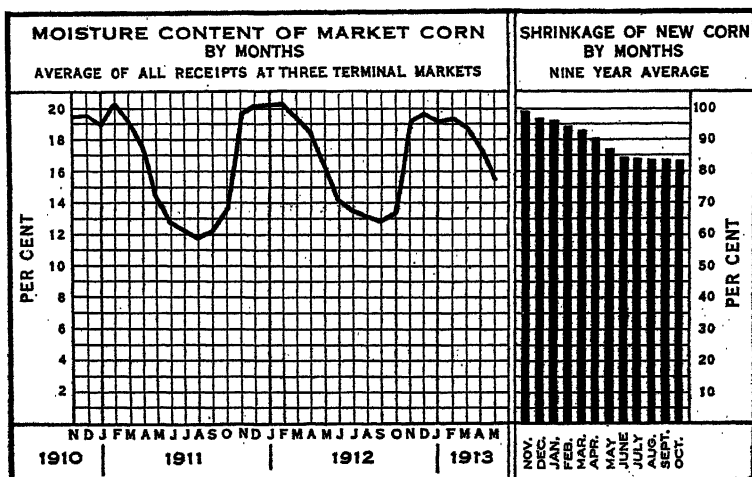


FIG. 36.—Left: The average percentage of moisture in corn, as determined by the U. S. Department of Agriculture, based on receipts at Baltimore, Chicago, and New Orleans, during the period indicated. Right: New corn stored at husking time in an open crib with tight roof and slat sides at the Illinois Agricultural Experiment Station averaged 16.61 per cent maximum shrinkage by August.

being lowest during those months, then the increase in price during the succeeding months, up to but not including October, more than compensates for shrinkage alone.”<sup>1</sup>

#### Exports and Imports.

Although the production of corn in the United States has largely increased in the last 30 years, the increased supply has not resulted in larger exports. In fact the quantity exported was much less in the latter half of this period than it was in the first half, as is shown in Figure 37. The highest

<sup>1</sup> Illinois Agr. Ex. Sta. Bull. No. 183, p. 23.



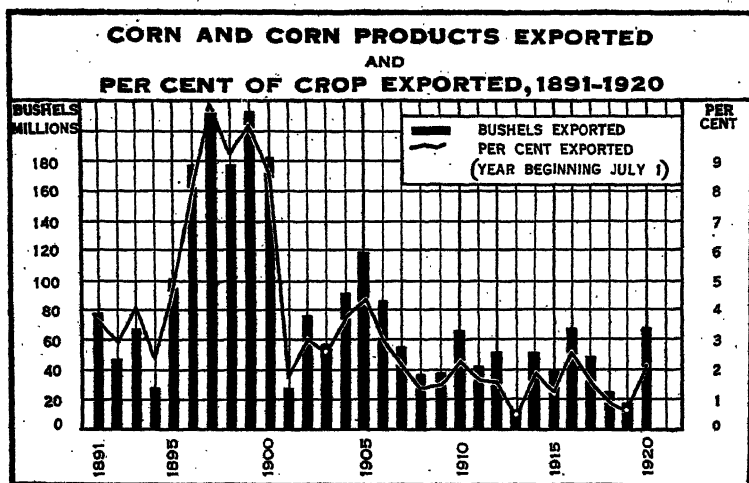


FIG. 37.—Annual exports of corn from the United States by years beginning July 1, 1891, and ending June 30, 1921, in bushels and in percentages of the total crop. Exports were largest from 1896 to 1900.

record for any 12 months was 213,123,000 bushels in the year beginning July 1, 1899, and the smallest was 10,726,000 bushels in 1913. Only once since 1900 have corn exports been above 100 million bushels. This was in 1905 when 119,894,000 bushels were shipped out. The population of the country has been increasing steadily and more animals have been fed from year to year. The demands thus created have taken care of the increased supply. The World War did not stimulate the export movement although slightly larger amounts than usual were sent out in 1916 and 1920.

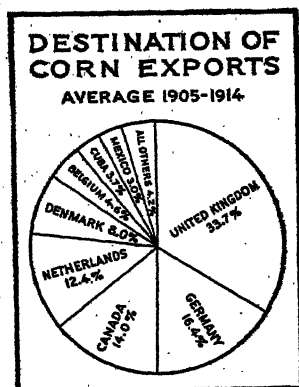


FIG. 38.—Destination of corn exports from the United States in the 10-year pre-war period, 1905-1914.

With an increase in production of corn in this 30-year period from approximately 2 billion bushels to 3 billion bushels annually and with no corresponding increase in quantity exported the percentage of the total crop exported must necessarily decrease. So we find in Figure 37 that although 11.1 per

cent of the total corn crop was exported in 1897 and 10.3 per cent in 1899, this dropped to below 3 per cent in 1907 and has remained below that ever since.

Corn exported from the United States goes mostly to a few countries, as shown in Figure 38, where it is used principally as feed for dairy cattle and other live stock. In the pre-war period, 1905-1914, the United Kingdom received about one-third of our corn exports. About one-sixth went to Germany and decreasingly smaller amounts to Canada, the Netherlands, Denmark, Belgium, Cuba, and Mexico.

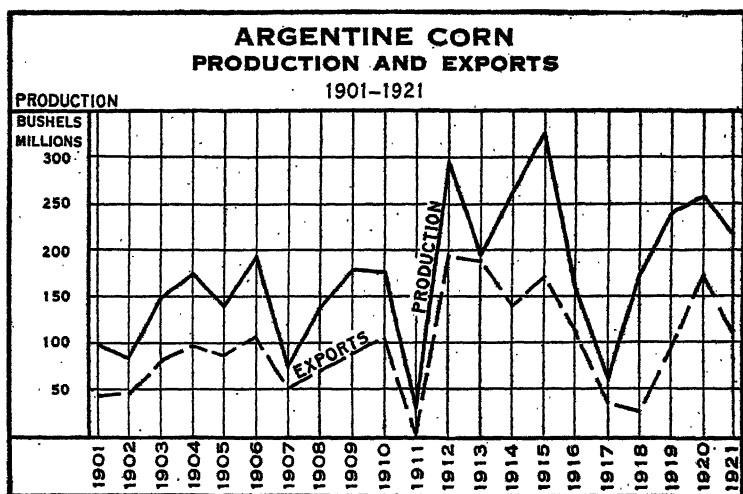


FIG. 39.—Argentina has been increasing in corn production for the last 20 years. Exports and production are closely correlated.

Imports of corn into the United States are almost negligible, rarely exceeding a few million bushels a year. Our largest imports were 15,821,000 bushels in the calendar year 1914. The bulk of this imported corn is from Argentina. It is utilized principally in the industries. A small amount is used as a poultry feed.

#### Argentine Corn.

Argentina has become important as a corn-growing country during the last 20 years (Fig. 39). The crop of 1901 was 98,842,000 bushels. The 200,000,000-bushel mark was passed in 1912, and the record crop of 325,179,000

bushels was produced in 1915. During the last three years the crop has averaged about 243,000,000 bushels. The record crop of 1915 in Argentina is about equal to the average annual production of merchantable corn in Iowa during the last 10 years.

The increase in production in Argentina has been more rapid than the increase in national consumption, consequently the exports of corn from that country have increased greatly. Exports from Argentina reached a maximum of 190,351,000 bushels in 1912. They were greatly reduced during the war period but increased again in 1920 to 173,642,000 bushels. The importance of Argentina as a corn-producing country from a world standpoint is this large ex-

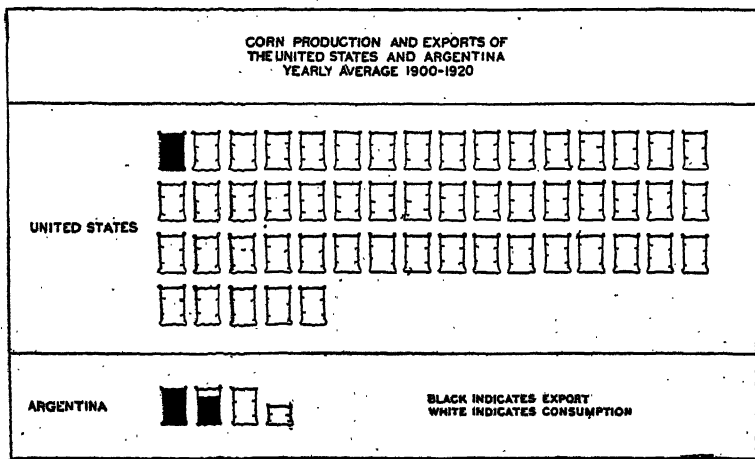


FIG. 40.—Each bag represents 50,000,000 bushels of corn. The United States produces more but exports less than Argentina.

portation. Nearly twice as much corn was exported from Argentina as from the United States in the 20 years, 1900-1920, as shown in Figure 40. Very little of the corn exported from Argentina is imported into the United States.

Most of the corn exported by Argentina goes to Europe, where it comes into competition with corn from the United States. Reports received from special investigators of our Government indicate that Argentine corn is preferred and is purchased instead of American corn, at least in several countries of Europe. The reasons assigned for this pref-

erence in France and Belgium, are: (1) The kernels are smaller, making it better adapted to poultry feeding; (2) it is sweeter and so is preferred as horse feed; and, (3) it contains 3 to 4 per cent less moisture, so will ship and keep in good condition longer. Price seems to have nothing to do with the preference for the South American product for at present Argentine corn sells for 8 to 10 cents a bushel more than American corn. In addition there are probably merchandising features that enter into the situation.

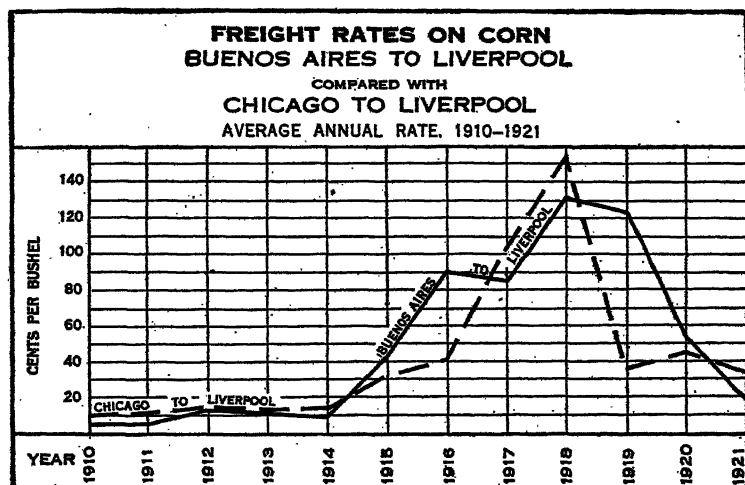


FIG. 41.—Freight rates to Liverpool from Chicago and from Buenos Aires have been about the same for many years. Argentina now has some advantage due to high railroad rates in the United States.

#### Freight Rates.

The combined rail and ocean rate from Chicago to Liverpool is normally but little greater than the rate from Buenos Aires to Liverpool (Fig. 41). During the war both rates were high, sometimes one and sometimes the other being the higher. Since the war ocean rates have fallen, but our own rail rates are still high, which favors shipments from Argentina to Europe and gives the corn producers of Argentina an advantage over the producers of our Corn Belt that they did not have before the war.

The freight rate per hundred pounds is generally the same for corn as for wheat, but this transportation charge is relatively a much heavier burden on corn, as it is generally less valuable per pound than wheat. Hence the increase in railroad freight rates since the war has affected the price and the movement of corn more than the price and movement of wheat.

The increased freight rates in effect for the last few years have increased the spread between farm and market prices and between prices in surplus and deficiency areas. These increased rates applied both to things that farmers sell and to things that farmers buy have added a heavy burden to agriculture. Coupled with the low prices for farm products in 1921 and the high prices for manufactured products the resulting situation has been critical.

### Financing Corn Production.

The production of corn is financed with less use of borrowed capital than is the case with most other staple farm crops. This is true partly because of the diversified system of farming followed in the Corn Belt, which distributes the farmer's income throughout the year more evenly than it is distributed in many other sections. Furthermore, the direct investment in a corn crop consists more of the farmer's own labor and less of purchased material and equipment than is the case with many other crops. Moreover what machinery is used in producing a corn crop is less expensive. The seed is usually produced on the farm and even when purchased the investment is small, since a bushel of corn will plant about 8 acres. For most other important cereals, a bushel or more of seed per acre is needed.

While relatively little capital is borrowed for the actual production of corn, a considerable amount of borrowed capital is used in converting this crop into pork or beef. Some farmers buy 'feeders' for their corn, while others buy corn for their hogs or steers, and still others buy both the animals and the feed. Relatively little merchant credit is used in the Corn Belt, credit usually being obtained directly from the banks.

## Prices.

The important factors that determine the general trend of corn prices have been considered in the foregoing pages. The prices received by the corn grower, the prices paid in certain markets, the general movements in corn prices, and

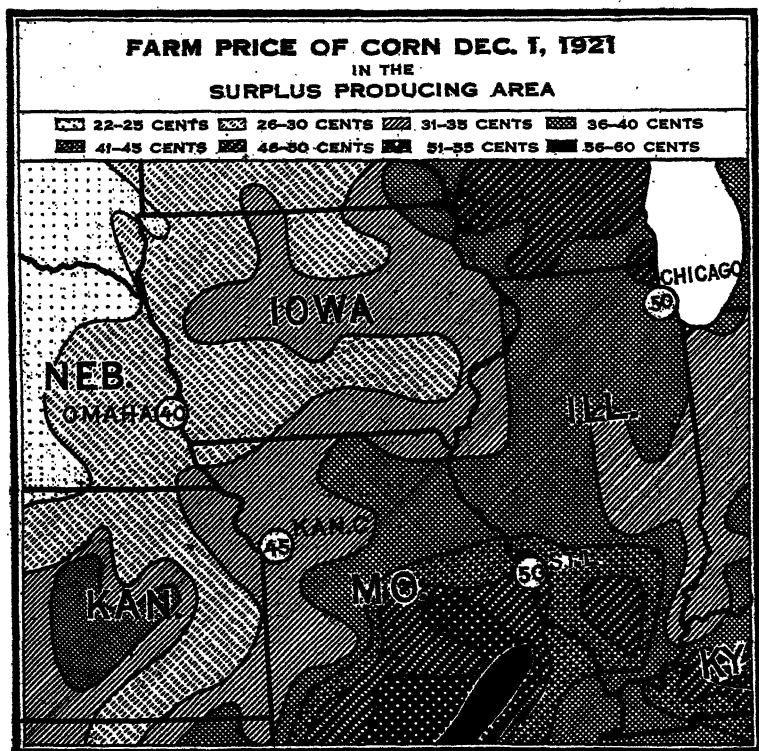


FIG. 42.—Lowest prices were being paid in the sections with the lightest shadings; and progressively higher prices are indicated by progressively darker shadings, based on reports received by the U. S. Department of Agriculture. Market prices are the average of cash sales in the respective markets in cents per bushel for No. 2 yellow corn on the same dates, reported in the Market Reporter.

the purchasing power of a bushel and of an acre of corn for a period of years will now be considered. The acute financial situation of the recent past as it affects the corn grower is thereby explained to some degree.

The farm prices of corn on December 1, 1921, in the principal surplus-producing area of the United States and the price of No. 2 yellow corn in some of the principal markets



ing southern Minnesota, about one-half of Iowa, and eastern portions of Nebraska and Kansas, the farm price of corn was only 26 to 30 cents a bushel. Eastward and westward from this section are irregular belts in which the price was 31 to 35 cents. In most of northern Illinois, northeast Missouri, and in small sections of Kansas and other States the price was 36 to 40 cents. Higher prices, up to 60 cents a bushel, were paid in other portions of the area shown on the map, as in Wisconsin and the southern parts of Missouri and Illinois. But the sections where the highest prices were

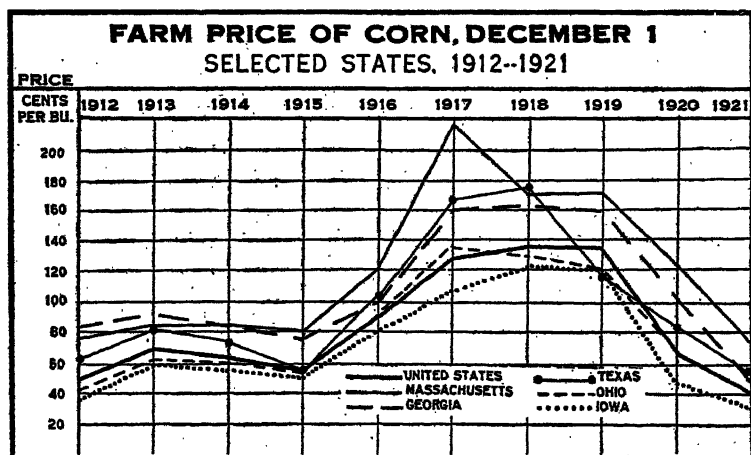


FIG. 44.—The price of corn is usually highest in Massachusetts, of these selected States, and lowest in Iowa. Increased freight rates have widened the spread between prices in producing and consuming States.

paid are really not a part of the surplus producing area. They belong rather in deficiency areas outside of the Corn Belt.

In general any area in which the price of corn is higher than in the market to which it is tributary or from which it must draw its supplies is an area of deficiency and not of surplus. In such areas the price of corn is on the basis of market price plus freight, while in the surplus-producing area it is based on market price minus freight. This principle is illustrated on a wider scale in Figure 43, in which are shown the average farm prices of corn in the different States on December 1, 1921. The price of corn is lowest in



States such as South Dakota, Nebraska, and Iowa, that produce much more corn than they use and are farthest from the places where corn is needed. On the other hand, the price of corn is highest in States such as Rhode Island, Nevada, and Arizona, that use more corn than they produce and are farthest from the sources of supply. In general, as distance from a point somewhere in the western part of the Corn Belt increases the price of corn increases. The exceptions to this rule are the result of local conditions.

That this is not a temporary condition but has extended over many years is shown in Figure 44, in which the price of corn in Iowa—of all the States that are given—is shown to be lowest for practically the entire 10-year period, 1912–1921. It was highest usually in Massachusetts, occasionally in Georgia or Texas.

#### Movements in Corn Prices.

Three distinct movements in corn prices are apparent when prices over a period of years are analyzed. These are (1) the seasonal fluctuations from month to month, (2) the annual variations, and (3) the trend of prices through periods of years.

#### Seasonal Fluctuations.

Corn prices are usually lowest at harvest time, when marketings are heaviest. From the low point, generally in December, they rise gradually during the following year until a new crop begins to come on the market, then decline rather sharply to the minimum again. The advance from low to high is generally greater in localities of large surplus than in localities of deficient production. The 5-year (1909–1914) average price and average monthly marketings of corn are shown in Figure 45 for the United States and for Ohio, Iowa, Georgia, and Texas. The marketing cycle is not the same in different parts of the country, but is influenced by the time of harvest, the high point coming earlier in the Southern States than in the Northern States. Therefore, prices do not advance or decline uniformly throughout the country.

It must not be concluded from the advance in prices taking place after harvest time that it will always pay to hold corn

for the higher prices that are likely to be paid later in the year. Several factors of expense and loss must be balanced against the increase in prices, such as cost of handling and storage, interest, and shrinkage due to loss of moisture and ravages by insects, rats, and mice. These factors vary with local conditions, consequently the farmer must determine largely for himself the time at which he should sell his corn.

#### Annual Variations.

From year to year prices are affected by the size of the crop, the carry-over from the previous year,

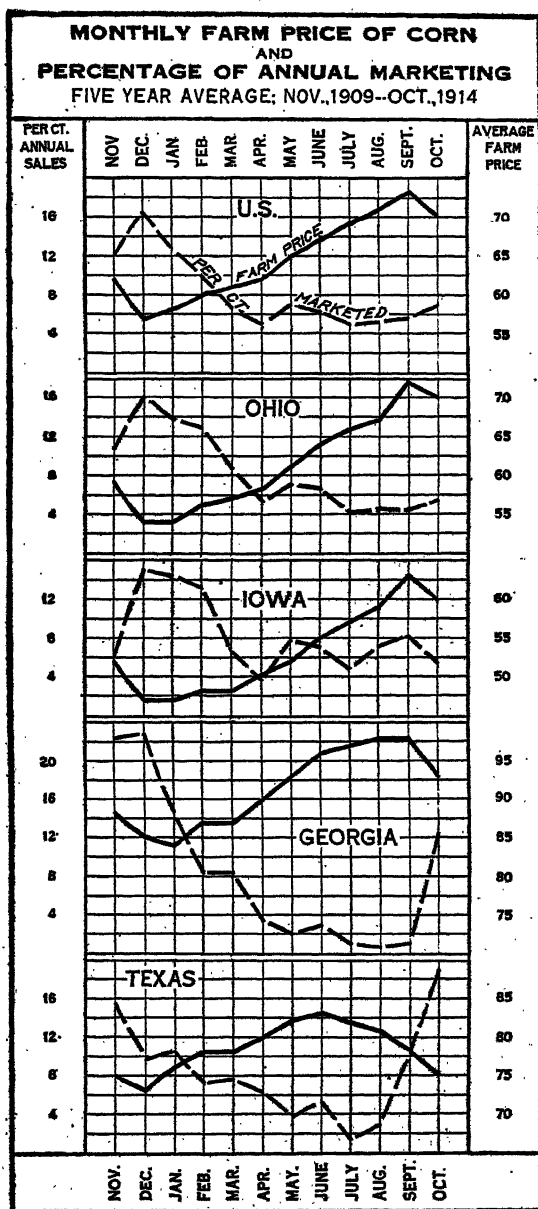


FIG. 45.—Prices (unbroken line) usually are lowest when marketings are heaviest and highest when marketings (broken line) are lightest. Price advances and declines are not uniform in different parts of the country.

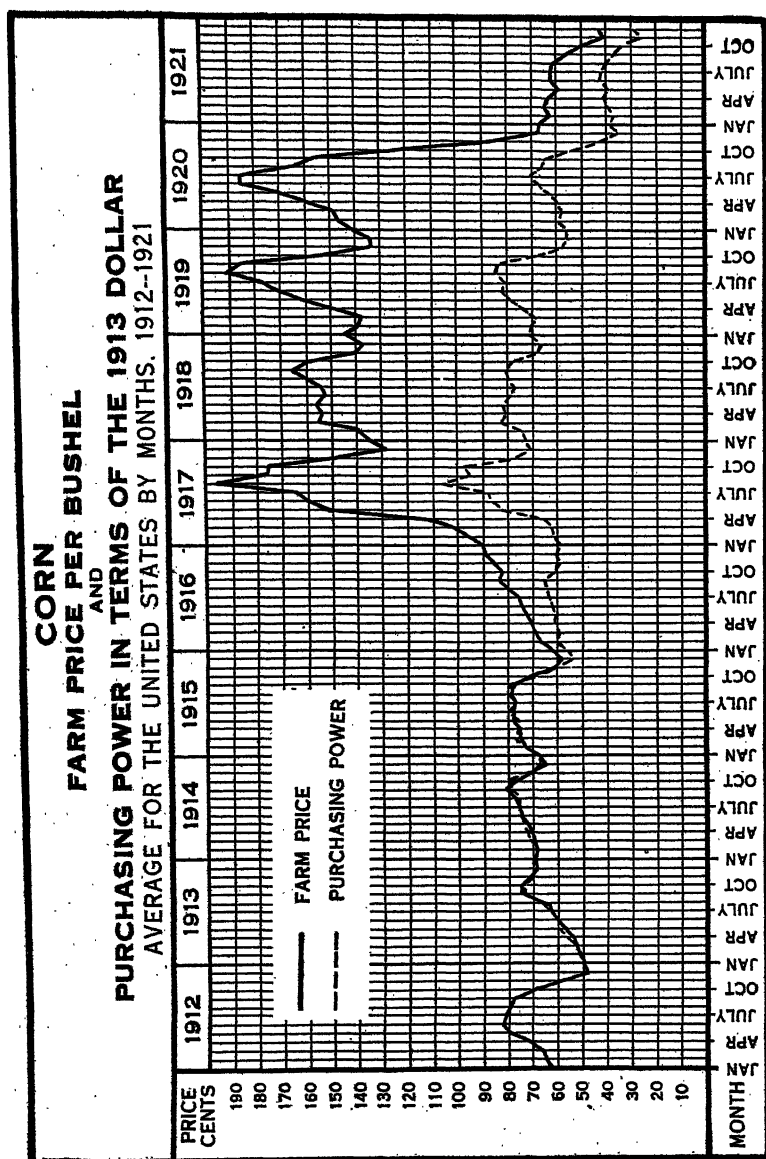


FIG. 46.—Annual seasonal price changes and the effects of war conditions are shown on this chart. The higher prices during the war period did not give the corn producer high purchasing power. Purchasing power is computed by dividing the farm price of corn by the Bureau of Labor index number (average 1913=100) for the wholesale prices of all commodities.

and the demand for corn. In the period 1916-1921, annual prices were also affected by the changes in the general price level, inflation, and deflation. The prices of corn in this period are shown in Figure 46. Seasonal fluctuations as well as annual variations from 1912 to 1921 are also illustrated in this figure.

### The Purchasing Power of Corn.

There is no "yardstick" to measure value of corn and other farm products similar to the yardstick used in measuring length. Neither is there anything comparable to the pound. Money is not a true measure of value, for money fluctuates with supply and demand.

A method has been devised, therefore, for determining the purchasing power of farm products. In the case of corn the average price in each month or year is divided by the index numbers for the prices of all commodities, which gives the purchasing power of corn.

If we start with the price of a bushel of corn we obtain the purchasing power of a bushel of corn as the final result. If we start with the average price received for an acre of corn the final result is the purchasing power of an acre of corn. In this way the data on purchasing power of corn, given in Figures 46, 50, and 51, were obtained.

### Prices During the War Period.

The European war had no appreciable effect upon the price of corn before the harvest season of 1916. Then, instead of declining as usual with the advent of the new crop, a slight decline occurred during September, after which prices began an upward course that continued until the average farm price passed \$1.90 per bushel in August, 1917. Several causes contributed to this abnormal movement: (1) A small crop and a small carry-over from the previous year, (2) an increase in the number of hogs which increased the demand for corn, (3) a shortage of wheat, which increased the demand for corn meal, (4) a strengthened foreign demand. Ordinarily the amount exported from the United States is negligible, compared with the total crop, and probably very little would have been exported in 1916-17 had it

not been for the war and a serious shortage in the Argentine crop, from which Europe annually obtains feed. These abnormal conditions greatly strengthened the export demand for our corn and resulted in about the usual exports, although our supply was small and prices were very high.

**AMOUNT OF CORN REQUIRED TO PURCHASE A WAGON,  
CORN BINDER, GRAIN BINDER AND A GANG PLOW  
SPRINGFIELD, ILLINOIS IN 1913, 1920 AND 1921**

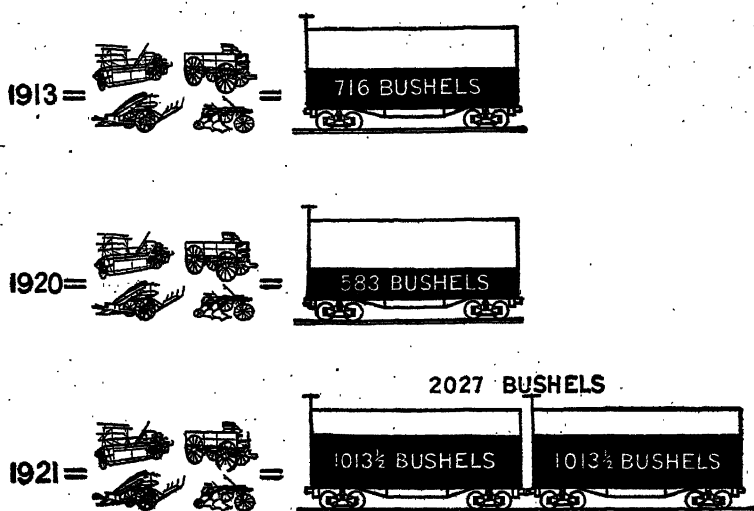


FIG. 47.—Less corn was required to purchase these farm implements in 1920 than in 1913, but in 1921 nearly three times as much corn as in 1913 was required to purchase them.

The price of corn was not fixed directly by the Government during the war, but it was influenced greatly by the policy pursued with respect to hogs. There was a great demand for meat which was indirectly a demand for corn. In the meantime the general price level had risen and this supported the high price of corn until the break came in the summer of 1920. The average farm price of corn began to decline in July, 1920. It fell precipitously until December 1, after which it declined more gradually until December, 1921, when it appears to have reached bottom.

Throughout the war period the purchasing power of corn, shown by the broken line in Figure 46, is a better index of the movement of corn values than price per bushel. In purchasing power the value of corn did not rise very high. Only in 1917 was it appreciably above the prices and purchasing value of 1912. In 1921 the purchasing power was far below that of any other year. This low purchasing power, together with the increased freight rates in effect for the last few years, created the situation illustrated in Figure 47. Prices of most of the things farmers buy have not decreased in proportion to the price of corn, consequently it requires much more corn to purchase needed things than it did previously.

#### Market Prices.

Corn does not enter into international trade to such an extent as wheat. Chicago is probably the most important corn market in the world. In the same sense that it may be said that the price of wheat is determined in Liverpool, the price of corn may be said to be determined in Chicago. The accompanying graph (Fig. 48) shows that the prices at New York and Liverpool move with the Chicago prices.

The influence of transportation costs on prices may be noted in this graph. High freight rates from Chicago before the Civil War caused a much wider spread between prices at these markets than have existed recently except in the war period.

#### The Trend of Prices.

There are periods during which the general trend of corn prices is upward or downward. Such periods are shown in Figures 48, 50, and 51. The direction of the trend is due in part to changes in the price level of commodities in general and in part to the possibilities and limitations for expansion of corn growing under profitable conditions. Thus, following the Civil War the general price level of all commodities declined until about 1897, when it turned upward. During these years also there was a rapid expansion of corn growing on the new and fertile soils of the Corn Belt. Conse-

# AVERAGE ANNUAL PRICE OF AMERICAN CORN CHICAGO, NEW YORK, AND LIVERPOOL

1840-1921

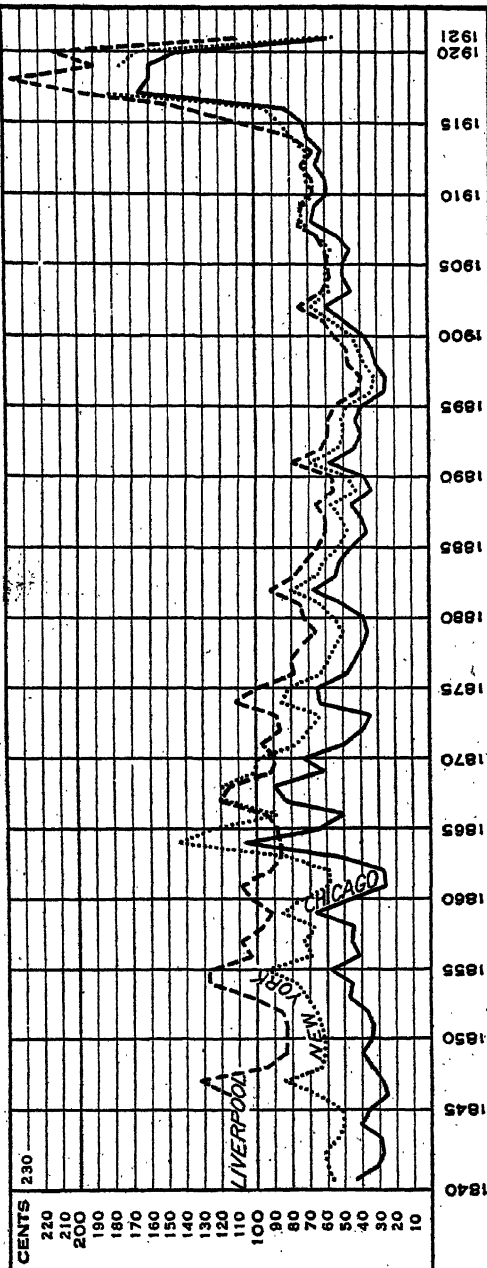


FIG. 48.—The trends of corn prices in leading world markets may be noted above. Prices in Chicago, New York, and Liverpool vary together. The spread between these markets had diminished to small differences before the late war.  
Sources: Chicago and New York, 1840-78, Aldrich Report, pt. 2, pp. 7-9; Chicago, 1879-1920, F.R.S. Current Yearbook, 1921, Crop Reporter; New York, 1879-1916, Statistical Abstracts of the U. S.; 1917-1920, New York Journal of Commerce; 1921, Crop Reporter; Liverpool, 1846-1878, Aldrich Report, pt. 1, p. 230; 1879-1903, Broomhall's Corn Trade Yearbook, 1904, p. 160; 1904-1921, the Corn Trade News.  
Grade: No. 2 mixed used where possible; Liverpool, mixed American maize.  
Price quotations: U. S., currency; Liverpool, the pound sterling, converted on the basis of par.

quently the trend of corn prices during this period was downward. With a decreasing rate of expansion in corn acreage and production prices began to rise, and the trend of corn prices was upward during the period beginning about 1897 and continuing to 1917.

The price of corn varies with the supply and demand. Supply is, of course, governed by production. Population is an index of demand. The production of corn per capita, therefore, is more significant in determining the general price trend than is the total production (Fig. 51). The population of the United States has been increasing faster than corn production during recent years, and this has been an important factor in raising the price and purchasing power of corn.

Farm value went far above the purchasing power during the war period. In 1920 and 1921 they began to resume normal relations again. A similar condition existed after the Civil War, but about 1877 or 1878 the purchasing power became higher than the value and remained slightly higher until about 1909.

### Situation and Outlook.

The history of the United States has been influenced largely by the corn crop. No picture of our national life is complete that does not portray corn as one of the most important factors in our national development and prosperity. Long before the coming of the white man, the Indian de-



Hogging Down Corn.

FIG. 49.—A common practice that saves labor.



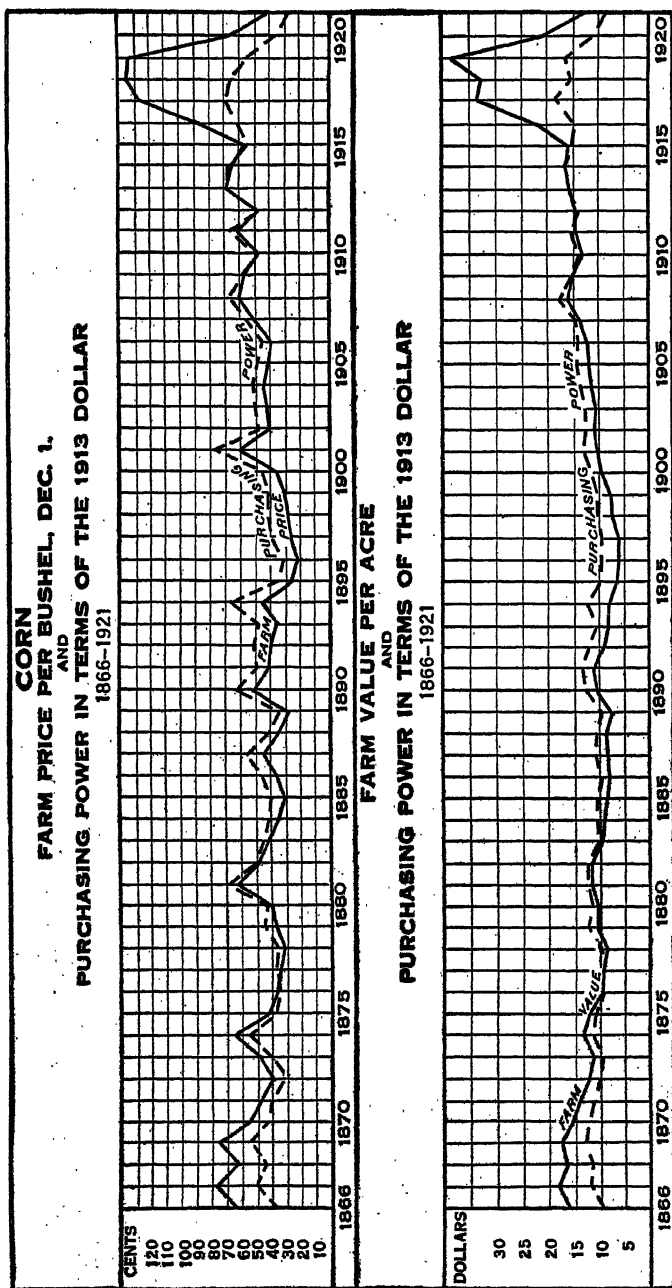


FIG. 50.—The two charts above show trends of farm prices and purchasing power per bushel and of value per acre of corn. It may be noted that the value and purchasing power per acre does not vary as much as the price per bushel. High prices for short crops and low prices for big crops tend to smooth out the value per acre from year to year.

Purchasing power computed by dividing currency price by Bureau of Labor index numbers (base 1913=100), average for all commodities. Average annual index used 1886-1913, December index 1914-1921.

pended upon corn as a principal source of food. The white man in turn adopted the culture of corn in the very beginning and the early Colonies would have failed had this crop not been ready at hand to nourish and sustain them. The western advance of our civilization and the development of our prairies are but instances of the part that corn has played in our advance to a place among the nations of the world.

The history of the development and the importance of the corn industry have been discussed in the preceding pages. The economic factors determining the profitableness of corn production also have been considered. During and since the World War, conditions have changed so widely and so rapidly that the factors involved have been out of adjustment at times with resulting extremes of profit and loss in this as in other industries.

The rapid decline in prices of most commodities during 1920 and 1921 is but a repetition of history. Following the War of 1812, and again after the Civil War, prices that had been excessive first fell abruptly and then recovered somewhat, only to resume a downward course more gradual but longer continued. High prices persisted longer following the World War than after the others, and the drop when it came was more violent. The rise was much the same as during the Civil War and, if history may be taken as a guide, a temporary recovery of prices followed by a gradual decline to stabilization and normalcy may be expected.

Corn prices went through these same cycles also. With high prices during the war, profits were large although increased costs of production prevented their being excessive. With the rapid drop beginning in 1920, profits first decreased and soon had changed to losses. The situation was especially acute because the prices of commodities in general declined less rapidly than those of farm products. In recent months corn prices have improved somewhat. Whether this is but a temporary rise similar to that following the Civil War remains to be seen. Conditions are not parallel. Following the Civil War came the rapid development of our great Corn Belt when large areas of new, productive soil were planted to corn, with a rapid increase both in total production and in

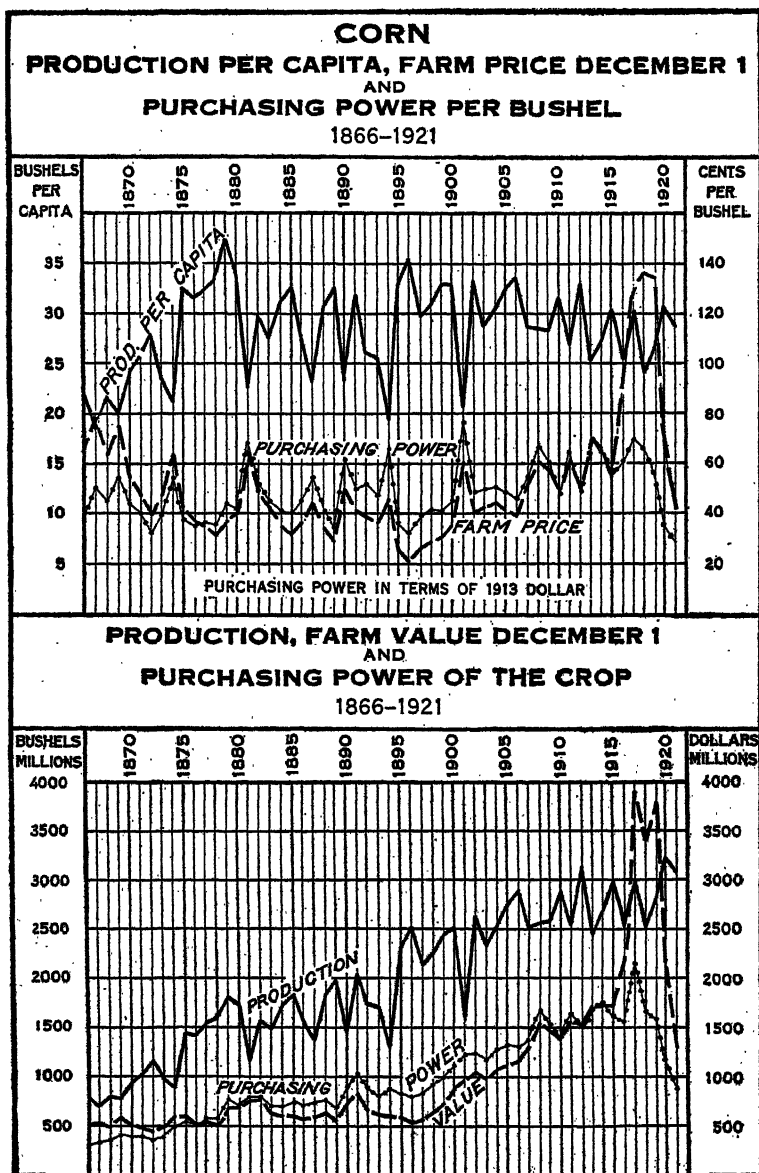


FIG. 51.—It may be noted above that farm price and purchasing power vary inversely to production per capita. Since 1896 the trend of production per capita has declined and the trend of farm price and purchasing power has been upward. War conditions 1917-1919 caused prices to be abnormally high and the general reduction in prices since has caused the prices and purchasing power of corn to be cut below the normal trend.

production per capita (Fig. 51). The possibilities of such expansion do not exist to-day. Total production has been about stationary for the last 10 years, and production per capita has been decreasing. With supply and demand so nearly balanced, the period of adjustment should not take as long.

Moreover, inasmuch as corn prices declined to an unduly low level, it seems probable that their recovery will be relatively greater and that they will not fall as low again. On the other hand, the prices of many other commodities have not yet completed their adjustment, and the purchasing power of corn should increase as this is accomplished. Some reduction in freight rates from the high point in 1921 has already been made. This is particularly gratifying, for high freight rates, coupled with low purchasing power of corn, would lead to violent and confusing changes in agricultural practices throughout the country.

The fundamental factors that will determine the profits in corn production in the future, as they have in the past, are supply and demand. For a number of years these have been so nearly balanced that a slight variation in either had a marked effect on price. The supply is determined by the carry-over from the previous year plus the amount of the current crop. The unknown factor is current production. It already has been shown that production in recent years is dependent largely on yield per acre, which in turn is dependent on the character of the season. Acreage also is of some importance, but a decrease in yield of only 3 bushels per acre over the entire United States would equal approximately the total production of the State of Illinois.

The corn crop is subject so largely to the influence of the environment that nothing can be foretold as to the size of the coming crop. Drought and frost make large differences in yield from year to year. Diseases and insect pests take their toll. With this in mind it does not seem wise to reduce the acreage unduly on the basis of a surplus in one or two years.

There are many farms, particularly in the Corn Belt, where a succession of corn crops from the same land has de-

pleted fertility. Advantage should be taken of periods of surplus production and low prices to rest such fields and to build up their productiveness by growing legumes and other forage crops. These crops, together with the low-priced corn, should be fed to live stock, the manure returned to the land, and the fields thus be prepared for higher acre yields at a time when better prices will mean large profits.

It has been shown that about 60 per cent of the total corn crop goes into the production of meat and milk products. A small percentage increase in this direction accordingly will increase consumption of corn materially. It is here that the corn grower himself can govern the demand for his product to a considerable extent. Hogs especially, offer an opportunity for increasing corn consumption because of their rapid multiplication and the short period required to complete their development.

Holding a part of the surplus corn on farms also is a safe practice. Reserves may well be increased in years of good crops to provide against seasons of partial failure.

We have had two crops of enormous size, each amounting to more than 3 billion bushels. In this lies much of the present difficulty. Happily, therefore, it is not the curse of famine that assails us. These large supplies are being marketed at a rapid rate. The stocks on hand on March 1, 1922, were some 250 million bushels less than they were on the same date a year before. The movement of "feeders"—hogs, cattle, and sheep—to the farms recently has been unusually heavy. Corn is being distributed through the markets in large volume. Corn exports to relieve the famine of Europe have been unusually large, amounting to about 65 million bushels in the first three months of 1922. The economic situation is improving, as evidenced by the fact that the price of corn on Iowa farms, for instance, has advanced from about 30 cents per bushel on December 1, 1921, to 48 cents May 1, 1922.

Economies must be practiced by the corn grower for some time to come, however. Production costs must be kept at a minimum. In planning operations farmers should try to make such readjustments as will enable them to sell corn at a profit even at a comparatively low price level. Careful

records of costs and returns, kept according to the method suggested on pages 193 and 194, will be of assistance in this direction, as thereby the results of the season's operations can be estimated beforehand with some accuracy. Old indebtedness must be reduced as much as possible and new debts must not be incurred except for productive purposes. Finally, a larger part of the family living should be produced on the farm.

If, in addition to these economies, other crops are substituted for corn when and where such a course is dictated by the best agricultural practice; if an increased amount of corn is fed to meat-producing animals; and if a part of the surplus is reserved on the farms against future needs; then, as the purchasing power of corn returns to normal, there is light ahead for the corn grower.

But what of the years to come? Can situations similar to that of the recent past be avoided in the future? Through organized effort providing for storage and necessary credit, marketings of corn can be spread over a longer period and excessive reductions in prices resulting from rapid marketings at harvest time can be avoided. Therefore, as has been pointed out by those who have studied the question carefully, "farm organization of a sound, wise, and far-seeing character is the key to a more prosperous and better paid agricultural industry" and further, "advancement in farm organization, if not preliminary to, at least must go hand in hand with improvement in the distributive machinery of the country."

Moreover, farmers can be kept advised as to the probable future demands for various products. This is needed, for if other nations should adopt a self-sustaining policy with regard to food we must take care not to produce an excess of corn and meat. In case the world requires less pork and beef the corn grower will have to modify his farm practices in harmony with these developments; in short, he must adjust his production to the world demands.

The future demand for corn depends on many things, most important of which is the demand for meat. If increasing supplies of meat, especially pork, are required for our own use and for export, then our corn production must be in-

creased, as we can not grow enough meat to supply an enlarged demand with our present production of corn. Our own population will increase for some years to come. If our present standards of living are maintained, greater corn production will be necessary to supply the meat that will be required by the increased population. The extent to which meat will constitute a part of the diet of this larger population will have an important bearing upon the farm practices of the corn grower.

An effort recently has been made to increase the consumption of corn products, such as corn grits, in Europe. This has met with some success for the present, on account of famine conditions and the comparative cheapness of these products. A continued demand from this source, however, is problematic because it is difficult to educate a people to the use of new foods.

It is the part of wisdom to study conditions as they develop not only in the United States, but throughout the world, and, from the trend of these conditions, as nations recover from the economic chaos of the past few years, to determine the future course. It obviously is impossible to guard against unforeseen conditions such as resulted from the World War. Nevertheless, a total production based on an intelligent survey of world requirements, together with economies resulting from better seed and cultural methods, and improved marketing organized in reference to seasonal supply and demand, will go far to prevent future crises for the corn grower.

# *Our* BEEF SUPPLY

By E. W. SHEETS, *Senior Animal Husbandman, Bureau of Animal Industry*; O. E. BAKER, *Agricultural Economist*; C. E. GIBBONS, *Specialist in Marketing*; O. C. STINE, *Agricultural Economist*; and R. H. WILCOX, *Farm Economist, Bureau of Agricultural Economics*.

## Importance of Beef Cattle.

THE importance of beef cattle in the agriculture of this country rests chiefly upon their ability to convert coarse forage, corn, grass, and other products of the land, either unfit or not wanted for human consumption, into a valuable and much-desired food. The value of cattle and calves slaughtered during the last 10 years represents 37 per cent of the total farm value of all meat animals slaughtered and of wool produced (see Fig. 1). Beef cattle are kept on 29 per cent of all farms in the United States (see Fig. 2). Since beef cattle are well adapted to rough land and sparse grazing, beef is the chief human food produced on about three-fourths of the total land area of the United States. This great unimproved area includes brush land, forests and cut-over land, swamps, and, most important of all from the standpoint of the cattle industry, the arid-grazing land of the West. It is obvious that most of this unimproved land will be used chiefly for grazing cattle for many years to come.

But the improved land produces more feed for cattle than the unimproved land, although it constitutes only 26.4 per cent of the land area of the United States. This improved land includes all land regularly tilled, mowed, lying fallow, or occupied by farm buildings, pastures which have been cleared or tilled, gardens, orchards, and vineyards. It is



plain that on this improved land also a great amount of forage unfit for human consumption is produced, such as hay, straw, stover, stalk fields, and aftermath.

However, the demand for beef is such that enough cattle are kept not only to graze the uncultivated areas and consume a large part of the roughage from cultivated crops, but also to eat a considerable proportion of the corn produced. Moreover, the feeding of beef cattle is closely linked with agriculture on improved land, because the most satisfactory

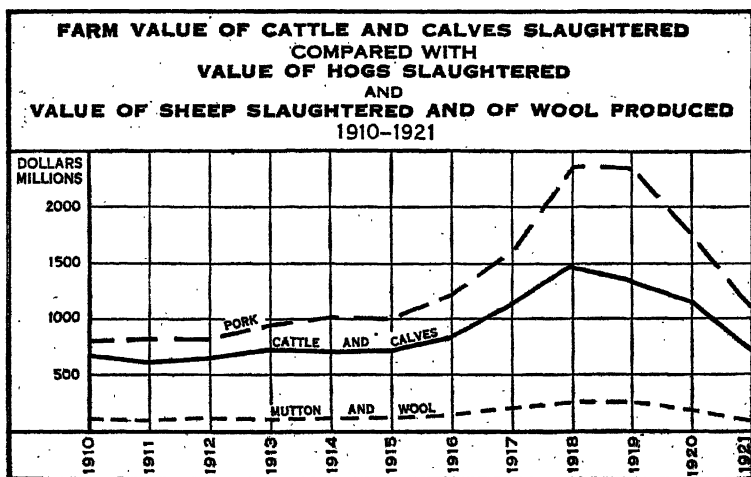


FIG. 1.—The farm value of cattle and calves slaughtered was around 700 million dollars each year from 1910 to 1915, then rose to 1,500 million dollars in 1918, but by 1921 had declined to the prewar average. Although the value of hogs slaughtered normally exceeds slightly that of cattle and calves, the farmer's investment in beef cattle is about twice that in swine. Cattle are slaughtered at an older age than hogs. It will be noted that the annual value of the hogs slaughtered rose more rapidly during the war period than that of cattle and calves slaughtered, and was still slightly higher in 1921 than the prewar average.

system of maintaining soil fertility involves the production of some legume on about one-fourth of the cultivated area each year, and the application of animal manure. The bulk of such legume hay can be used most advantageously by beef cattle. In fact, a great many beef cattle are fattened solely to keep up soil fertility, the value of the manure affording the principal profit from the enterprise.

The production of beef cattle in the United States is important not only in our agriculture but also in the agriculture of the world. Over one-sixth of the world's cattle are

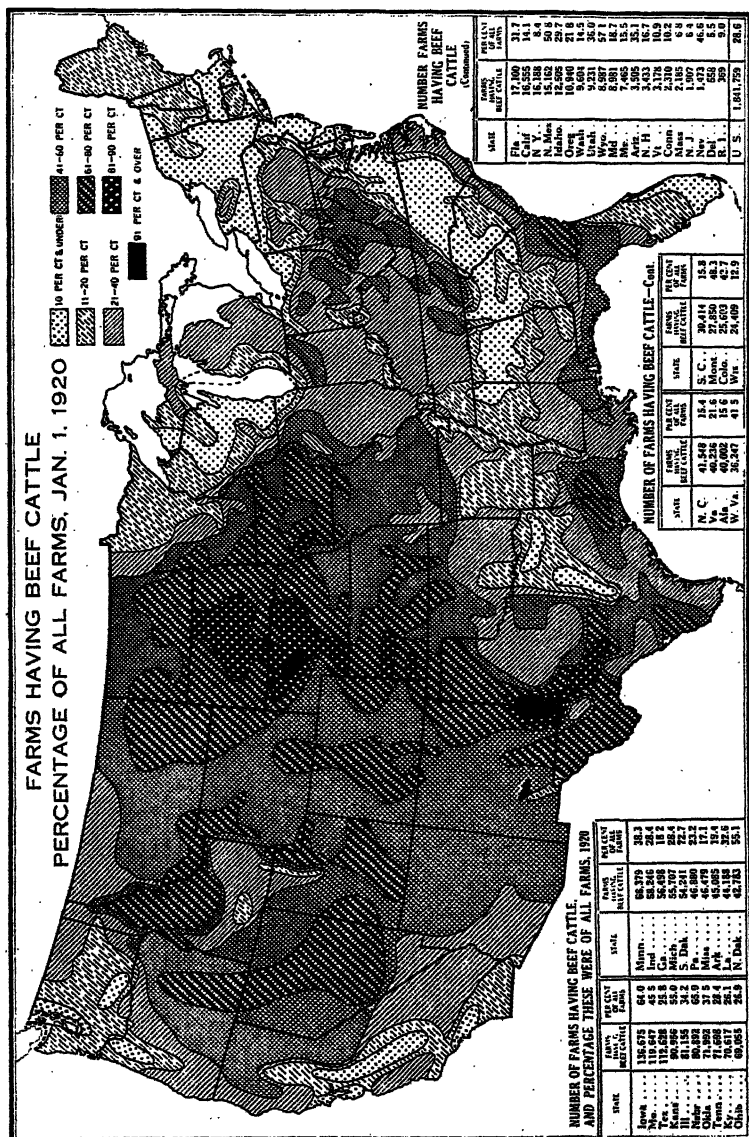


FIG. 2.—This map shows the proportion of the farmers who had beef cattle in 1919. From the Mississippi River to the Pacific Coast regions from 40 to 80 per cent of all farms reported beef cattle. A similar proportion is found along the Gulf and South Atlantic Coast, and in the mountain districts of Virginia, West Virginia, and North Carolina. Less than 20 per cent of the farmers had beef cattle in much of the northern portion of the Cotton Belt, and in the dairy districts of the Northeastern States, of the Lake States, and of the Pacific Coast.

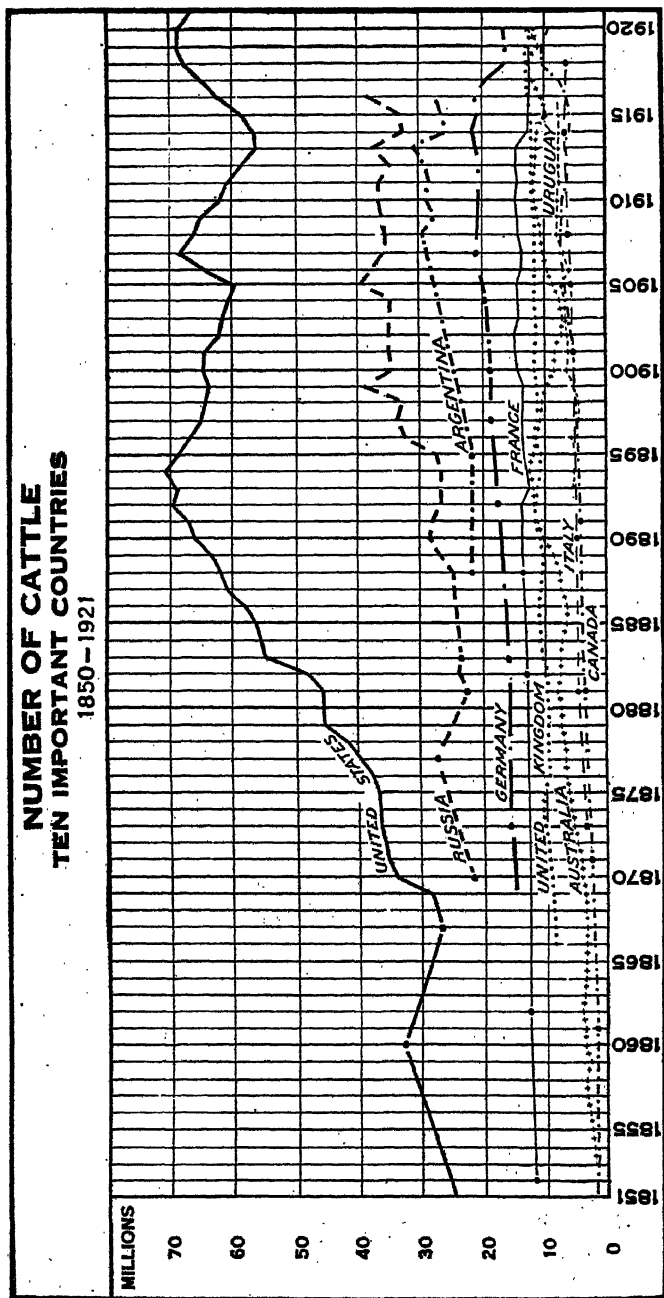


FIG. 3.—The number of cattle in France has remained almost stationary for 70 years; in Germany the number increased until 1907, in Argentina till 1913, in Russia up to 1899, and in the United States there was a rapid rise to 1894, since which year the number has remained more or less constant, except for wide periodic fluctuations. (See Fig. 74.) In the other countries shown the number of cattle slowly increased up to 1918. The increase in the United States from 1867 to 1894 was about equal to the total number of cattle in the United Kingdom, France, Italy, Australia, and Canada to-day.

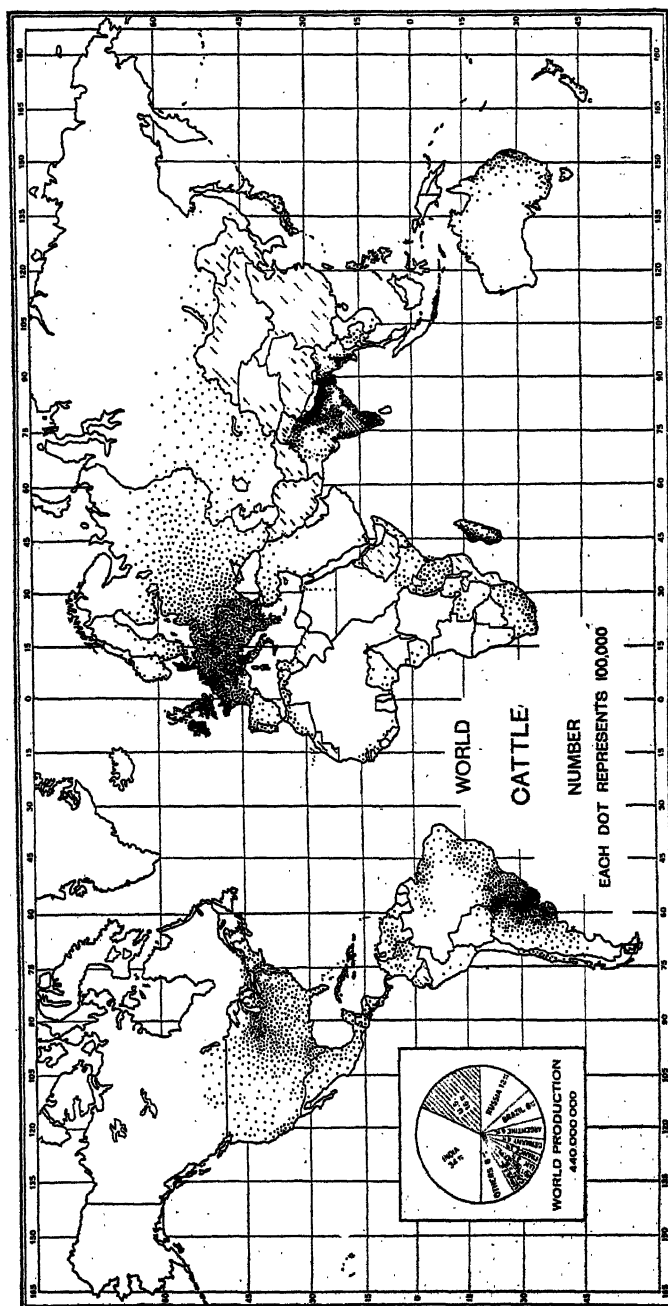


FIG. 4.—The centers of world cattle production are Europe, India, the United States, and southeastern South America, particularly the La Plata River Basin of Argentina, Uruguay, and southern Brazil (see Fig. 3). No figures are available for China and several areas in Africa. The large population of western Europe requires importation of beef in addition to the home supply. Most of these imports come from South America, North America producing now little more than enough for its own needs. India exports practically no beef.

in the United States. The principal surplus-producing countries, however, are now in the Southern Hemisphere. Western Europe produces less than it consumes, and North America, except during the war, has been producing little more than enough to supply its own needs. (See Figs. 3, 4, 69, 74.)

### Westward Movement of the Beef-Cattle Industry.

The early Spanish explorers introduced cattle into Florida, the lower Mississippi Valley, and the Southwest during the sixteenth century. The colonists from England and Holland brought cattle to the Atlantic coast during the seventeenth century. Although the Atlantic coast was generally covered with forests, there were in addition open lands along the rivers and coasts which provided considerable grazing. The settlers took their cattle with them as they pushed back from the coast settlements. By the middle of the seventeenth century an important cattle industry had developed in the Connecticut River Valley. From the pastures of New Hampshire and Vermont large droves were annually driven south to be sold at the Brighton Market near Boston or to feeders and dairymen in the three southern New England States.

The settlement of the Shenandoah Valley in Virginia early in the eighteenth century caused a big expansion in cattle production. Settlement pressed westward from the valley and about 1772 settlers from Virginia and Pennsylvania had reached the Monongahela Valley, where herds as large as 400 to 500 head were soon common. From the Shenandoah Valley settlement also spread eastward into the Piedmont of Virginia and the Carolinas, where peavines, other luxuriant forage, and the mild climate made the Piedmont section a great cattle country, famous for its "cowpens" and "cowboys." It was said that a steer could be raised as cheaply as a hen. Following the invention of the cotton gin in 1795, the Piedmont became a cotton country and the cowboys went westward.

As better markets developed in the East and cheap grazing lands were opened in the West and in remote sections of the Eastern States, eastern cattle feeders depended more and more on the drovers for their supply of cattle. Cattle from the grazing regions of the West were driven east across

the Allegheny Mountains in the fall. Shorter drives were made from the grazing regions of northern and central Pennsylvania, and from northern New York and New England. Feeder cattle arriving from the West in the fall were fattened during the winter and spring months and marketed before the western fat cattle began to arrive. Few cattle were fattened on corn until they were 3 or 4 years old. Stockmen who lived near the large cities had a decided advantage in case of a temporary rise in prices, as they could drive their cattle to market in a short time.

The early settlers in the Ohio River Valley found that large crops of corn could be raised very cheaply. As they had no remunerative market for this corn, they fattened cattle, drove them to the eastern markets, and competed successfully with cattle feeders of the East. The first corn-fed cattle from Ohio reached Baltimore in 1805. The cattle, in droves of 150 to 500, were mostly 4 or 5 year old steers, which were fed on corn from four to six months. The driving occurred in the spring and summer and required about six weeks. Ohio, chiefly, and Kentucky were said to have supplied the eastern markets from 1840 to 1850 with nine-tenths of the western corn-fed cattle which they received. Grass-fattened cattle were sent in the fall in limited numbers from Ohio, but no cattle arrived in those markets from the West during the winter.

In 1820 colonists from the East settled in Texas about Austin, and engaged principally in cattle raising. However, the original cattle of Texas, New Mexico, Arizona, and California came from Mexico. In 1833 the Spanish missions estimated their holdings at 424,000 cattle. Driving cattle to the New Orleans market from Texas began in 1842. In 1846, 1,000 head were driven from Texas to Ohio. Thenceforth, driving of Texas cattle northward gradually increased, but did not become a well-established business until after the Civil War, which had left a great surplus in Texas and a scarcity in the North.

Illinois was so far from the Atlantic coast that it did not become an important cattle-raising State until about 1850. However, long before this Iowa, Missouri, and Illinois had furnished thousands of head to the cattle feeders of Ohio. This territory had a further advantage over that farther north and east, because the Mississippi River was open earlier

in the spring for shipping to New Orleans. Settlements were made west of the Missouri about 1850.

The feeders in the Eastern States lost much of their advantage in being close to the markets by the opening of railroads from the Ohio River Valley. Western cattle ar-

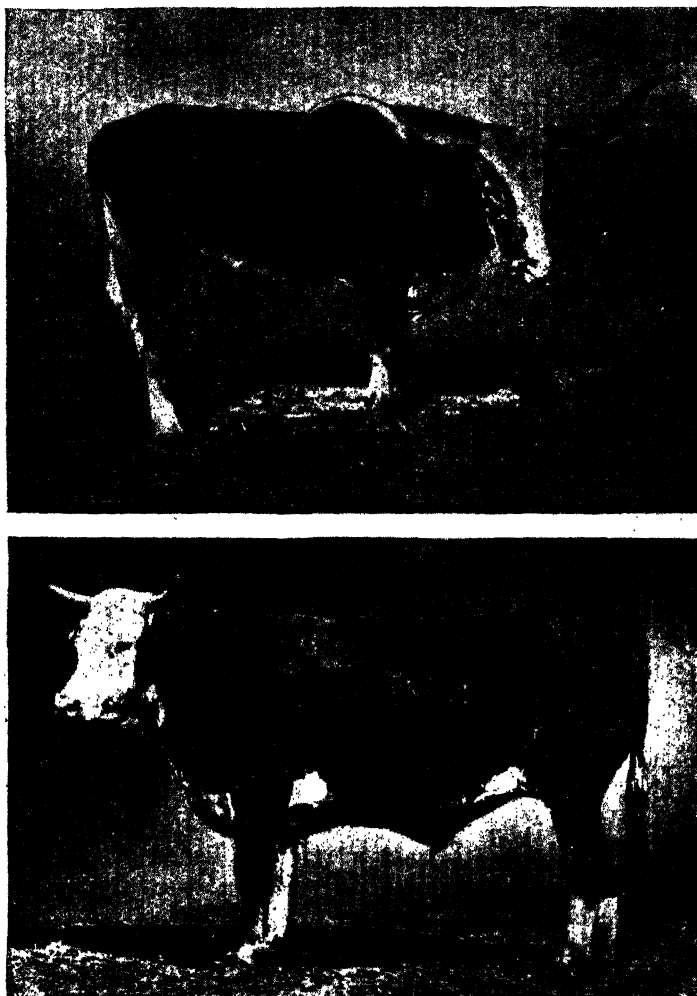


FIG. 5.—The famous Texas Longhorn steers of former years are almost extinct. The improved breeds of beef cattle not only mature much quicker but also dress out considerably more edible meat of better quality. In some western States only purebred bulls of approved type are allowed on the open range. Substantial progress in the use of better sires has also been made in most other States.

rived throughout the year, instead of in the summer and fall. As cattle could be shipped directly from the grazing lands of Illinois to the eastern markets, feeding in Ohio diminished considerably. It was no longer profitable to fatten cattle to a high degree for the long drive across the Appalachian Mountains. By 1860 the railroads extended from the Atlantic to the regions beyond the Mississippi River. Central Illinois and eastern Iowa became a great cattle-feeding district on account of free grazing lands to the south and west, railroad connection with eastern markets, the temperate climate, the adaptability of the rich prairie



FIG. 6.—Branding calves at an annual roundup. Note the high-grade beef cattle which have taken the place of the Texas Longhorns. The use of purebred beef bulls in range herds began about 40 years ago.

grasses for grazing, and the ease with which corn could be produced. Missouri and Texas were now the chief sources of feeder cattle.

From 1800 to 1860 the beef produced in the Southeastern States was insufficient for local demand. In most cases cattle were given little attention. Numbers were greatly reduced during the Civil War. Florida usually had a surplus and exported most of it to the West Indies. Until about 1910 there was practically no improvement made in the cattle of the Cotton Belt on account of the Texas fever ticks and the dominance of the cotton crop (see Figs. 7 and 8).

The development of the range-cattle industry on the Great Plains from 1870 to 1885 is a very important part of the



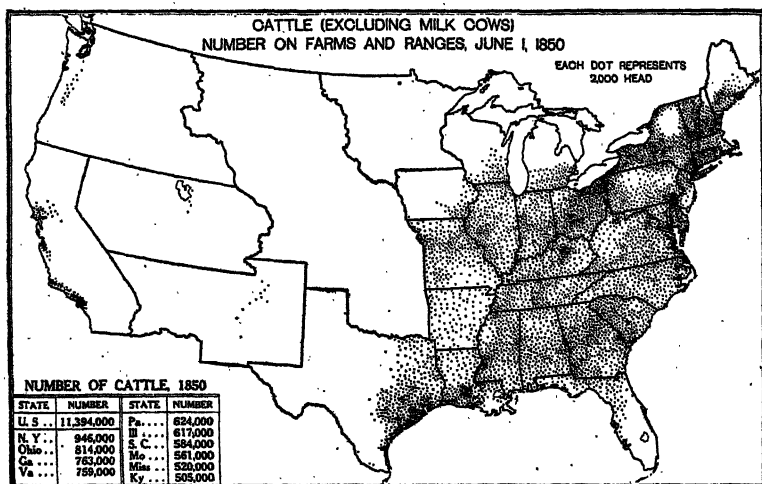


FIG. 7.—The census of 1850 was the second cattle census but was the first separating milk cows from other cattle. In 1850 cattle other than milk cows were distributed fairly evenly over the settled area of the United States. Denser areas may be noted in New England, in western New York, around Philadelphia in Pennsylvania, in northeastern Ohio and the Scioto Valley, in the blue-grass region of Kentucky, in southern Louisiana, along the Gulf coast of Texas, and in southern California. Cattle were driven from western New York, Ohio, and Kentucky to eastern markets for slaughter.

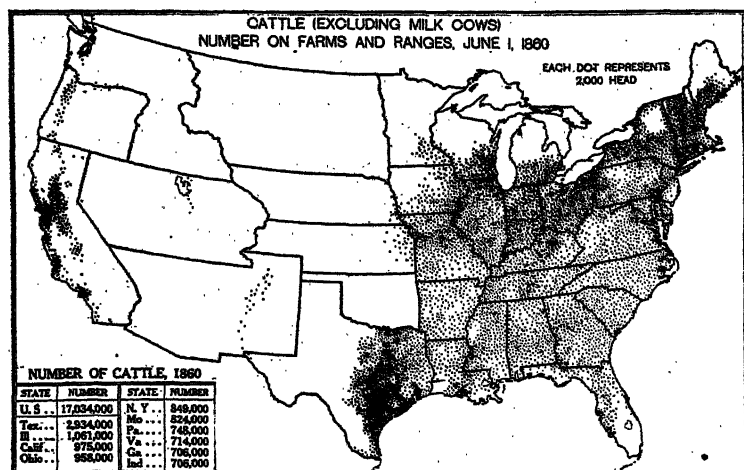


FIG. 8.—By 1860 there had been a notable shift in cattle other than milk cows. There was a great increase in the States north and west of the Ohio River, in Texas, and in California. An increase in number may be noted in the Territory of New Mexico and in Utah. Cattle had not yet reached the Great Plains area. (See Fig. 20.) The driving of cattle from Ohio and Kentucky over the mountains to eastern markets had almost ceased by 1860.

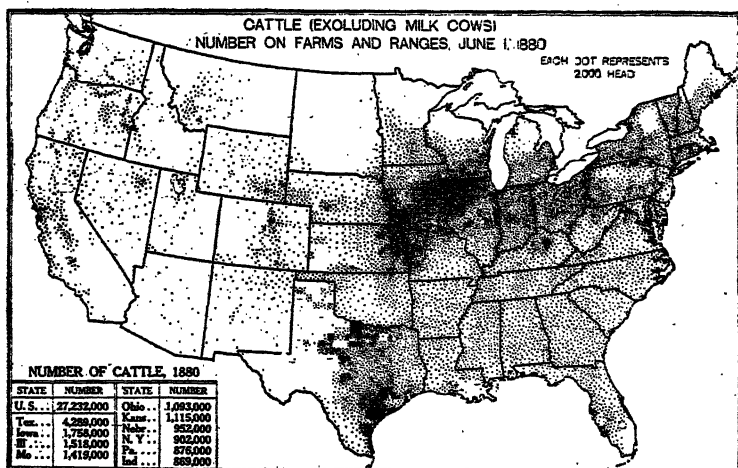


FIG. 9.—By 1880 cattle were grazing over most of the Intermountain areas of the West, and in the Great Plains region, except the Dakotas and eastern Montana. A great reduction in the number of cattle in California may be noted. The number had greatly increased in Iowa, Wisconsin, Illinois, Missouri, Kansas, and Nebraska. The South, excepting Texas, had fewer cattle than before the Civil War.

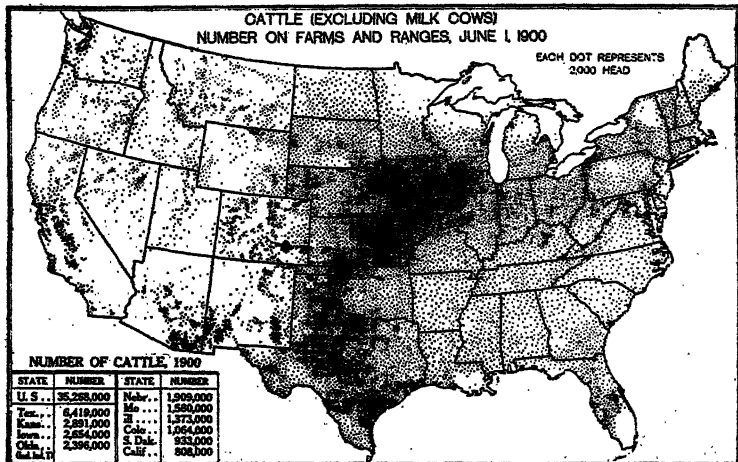


FIG. 10.—From 1880 to 1900 there was a decided falling off in number of cattle, excluding milk cows, in the Northeastern States, due to the growth of the dairy industry, while the number of beef cattle on the Great Plains had increased very greatly. The western part of what is now well known as the Corn Belt was also carrying a large number of cattle. The increase in Iowa and Kansas is especially noteworthy.

history of stock raising in the United States. Texas was the chief source of supply for the entire region, as cows could calve usually at any time of the year and take care of their calves, which was not true in the North.

Utah and Oregon, which had been stocked by cattle driven westward over the Mormon Road and the Oregon Trail in the forties, also became important sources of supply for the ranches of the Great Plains about 1870 (see Figs. 8 and 9).

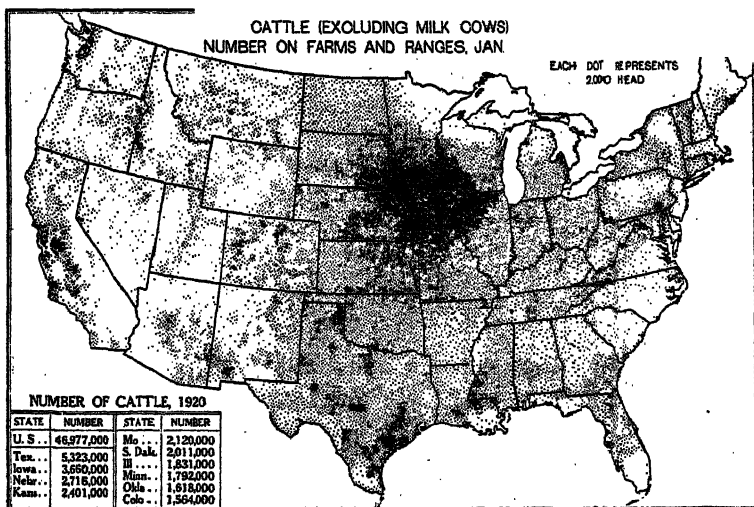


FIG. 11.—The number of cattle has increased since 1900 in Minnesota, where wheat growing has to some extent given way to more live stock and in eastern South Dakota and Nebraska. In the Western Range regions the number of cattle has increased in most sections despite the breaking up of many cattle ranches by homesteaders. The Pacific Coast also shows a considerable increase, as well as the Coastal Plains portion of the Cotton Belt. The decrease is notable in Kansas and central Texas.

The cattle industry on the Pacific coast was greatly stimulated by the tide of immigration following the discovery of gold. Some were driven from Texas and Oregon to supply the demand for meat. Shortly after 1864, when a severe drought in California forced out or destroyed many thousands of cattle, wheat displaced cattle as the chief farm product. The Dakotas and the Mountain and Inter-Mountain States were but sparsely stocked in 1880 (see Fig. 9). By 1900 nearly all of the western territory was occupied and

stocked close to its capacity (see Fig. 10). The number of all cattle in the United States reached the highest point in 1894. Progress since 1894 must be measured in the quality and productivity of the cattle (see Fig. 11).

### Purebred Beef Cattle.

The importance of the purebred beef-cattle industry is shown by the fact that, according to the census of 1920, over 3 per cent of the beef cattle were reported to be registered

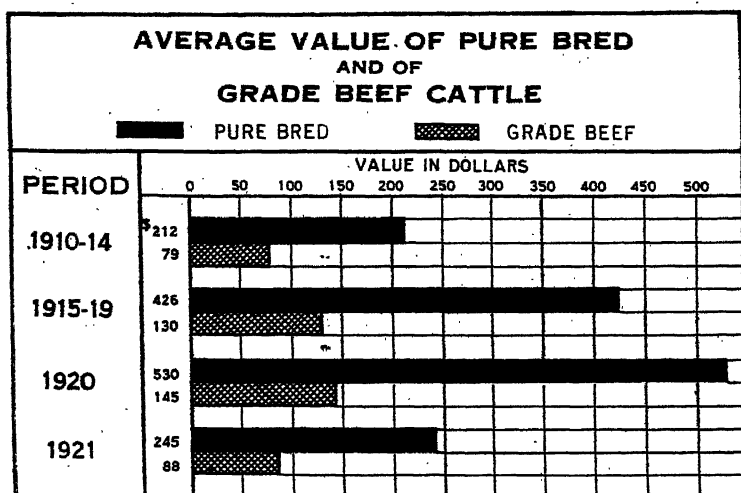


FIG. 12.—The average sale value per head of all purebred beef cattle sold in public auctions is about three times the average value of 1,000-pound good to choice steers in the Chicago market. In 1920 the average sale price of purebred animals was nearly four times that of good to choice steers at Chicago. Even when sold for beef the value of purebred cattle is normally considerably higher than that of grade cattle.

purebreds and over 11 per cent of all farms having beef cattle reported purebreds. Moreover, according to public sales held during the last 20 years, purebreds are about three times as valuable as grades (see Fig. 12). Purebreds constitute approximately 10 per cent of the value of all beef cattle. The main object of the purebred beef-cattle industry is to produce breeding stock which transmit to their offspring early maturity, thick fleshing of meat of high quality, and the ability to use grass, roughage, and grain economically.

Over 50 per cent of the purebred beef cattle are in the Corn Belt (see Fig. 18). Before the eradication of the Texas-fever tick began and before the boll weevil started its ravages, there were practically no purebred herds in the Cotton Belt. On the western range there are many purebred cattle that are not registered, due to failure to register the offspring from registered cattle. Similar herds have resulted from the use of a succession of registered bulls over periods of from 20 to 40 years. Many of these western breeders produce very desirable range bulls and sell only the best for breeding purposes.



FIG. 18.—A herd of purebred Aberdeen-Angus cows and their calves on pasture on a Corn Belt farm.

Table 1 shows what a great market purebred breeders have for their surplus stock. There are 68,454 farms in the United States reported as having purebred beef females (see Fig. 17). Over a million farms report grade beef cows. As 440,210 farms report beef bulls 1 year old and over and only 187,284 report purebred beef bulls of all ages, there are nearly a quarter of a million farms which might be keeping purebred beef bulls instead of the grades and scrubs which they have. As a matter of fact, breeders have not enough purebred bulls of breeding age to put one on each farm where a beef bull is kept. While there is 1 beef bull over 1 year old for every 17 beef cows, there is only 1 purebred beef bull of any age for 32 beef cows. With such a shortage of purebred bulls they should be well cared for and distributed to the very best advantage.

TABLE 1.—Relation of purebred beef cattle to all beef cattle.

[Based on census of Jan. 1, 1920.]

| State.                    | Farms reporting purebred beef cattle. | Per cent of beef cattle farms which report purebreds. | Farms reporting beef cows 2 years old and over. | Grade cows 2 years old and over per grade bull 1 year old and over. | Per cent of farms with beef cows reporting beef bulls. | Per cent of farms with beef bulls reporting purebred beef bulls. |
|---------------------------|---------------------------------------|---|---|---|--|--|
|                           | Number.                               | Per cent.   | Number.   | Number.   | Per cent.  | Per cent.  |
| United States.....        | 206,387                               | 11.20   | 1,041,052                                       | 17  | 42.29  | 42.52  |
| Alabama.....              | 1,161                                 | 2.90  | 20,115  | 14  | 28.89  | 18.71  |
| Arizona.....              | 269                                   | 7.67  | 2,798   | 19  | 59.11  | 14.99  |
| Arkansas.....             | 1,815                                 | 4.02  | 24,691  | 19  | 19.47  | 31.27  |
| California.....           | 1,401                                 | 8.46  | 11,787  | 21  | 52.13  | 22.48  |
| Colorado.....             | 4,213                                 | 16.46   | 19,569  | 20  | 52.65  | 39.73  |
| Connecticut.....          | 123                                   | 5.32  | 678   | 9   | 38.35  | 39.23  |
| Delaware.....             | 4                                     | .72   | 259   | 11  | 20.85  | 7.41   |
| Florida.....              | 198                                   | 1.16  | 13,441  | 31  | 22.51  | 5.82   |
| Georgia.....              | 949                                   | 16.80   | 31,880  | 16  | 25.74  | 9.99   |
| Idaho.....                | 3,249                                 | 25.98   | 8,370   | 21  | 47.44  | 79.55  |
| Illinois.....             | 14,501                                | 17.87   | 49,416  | 12  | 51.03  | 49.63  |
| Indiana.....              | 6,611                                 | 11.35   | 32,743  | 12  | 38.26  | 42.96  |
| Iowa.....                 | 29,856                                | 21.85   | 89,351  | 13  | 62.95  | 48.85  |
| Kansas.....               | 14,261                                | 15.68   | 61,128  | 15  | 55.53  | 38.78  |
| Kentucky.....             | 2,356                                 | 3.34  | 24,873  | 11  | 24.55  | 31.48  |
| Louisiana.....            | 563                                   | 12.74   | 34,044  | 27  | 15.46  | 9.71   |
| Maine.....                | 554                                   | 7.42  | 2,032   | 6   | 49.90  | 43.00  |
| Maryland.....             | 226                                   | 2.52  | 3,035   | 5   | 55.26  | 12.22  |
| Massachusetts.....        | 149                                   | 6.82  | 1,039   | 11  | 31.28  | 36.00  |
| Michigan.....             | 4,461                                 | 8.01  | 12,325  | 10  | 33.73  | 88.70  |
| Minnesota.....            | 14,688                                | 21.48   | 26,701  | 10  | 80.94  | 64.58  |
| Mississippi.....          | 1,704                                 | 3.67  | 28,504  | 20  | 22.89  | 24.81  |
| Missouri.....             | 15,145                                | 12.66   | 83,432  | 16  | 32.94  | 46.67  |
| Montana.....              | 4,061                                 | 14.58   | 20,917  | 23  | 42.42  | 44.29  |
| Nebraska.....             | 14,441                                | 17.85   | 56,598  | 17  | 62.63  | 38.24  |
| Nevada.....               | 239                                   | 16.23   | 1,259   | 22  | 66.72  | 32.62  |
| New Hampshire.....        | 350                                   | 10.19   | 834   | 6   | 57.19  | 59.96  |
| New Jersey.....           | 19                                    | 1.00  | 910   | 7   | 35.16  | 3.11   |
| New Mexico.....           | 1,298                                 | 8.56  | 13,890  | 21  | 45.03  | 20.11  |
| New York.....             | 403                                   | 2.49  | 5,658   | 16  | 17.27  | 33.16  |
| North Carolina.....       | 809                                   | 1.95  | 21,637  | 13  | 16.09  | 18.57  |
| North Dakota.....         | 8,241                                 | 19.26   | 21,223  | 13  | 64.10  | 57.40  |
| Ohio.....                 | 6,068                                 | 8.79  | 31,000  | 10  | 39.16  | 39.02  |
| Oklahoma.....             | 8,498                                 | 11.80   | 51,592  | 19  | 33.88  | 43.49  |
| Oregon.....               | 2,008                                 | 18.35   | 7,839   | 21  | 51.65  | 49.32  |
| Pennsylvania.....         | 1,518                                 | 3.24  | 11,286  | 10  | 24.04  | 44.70  |
| Rhode Island.....         | 7                                     | 1.90  | 164   | 11  | 35.98  | 84.75  |
| South Carolina.....       | 368                                   | 1.21  | 14,124  | 12  | 21.01  | 9.50   |
| South Dakota.....         | 13,934                                | 25.69   | 35,954  | 18  | 69.96  | 53.38  |
| Tennessee.....            | 3,210                                 | 4.48  | 26,906  | 10  | 27.96  | 35.91  |
| Texas.....                | 6,006                                 | 5.33  | 75,918  | 22  | 35.69  | 20.62  |
| Utah.....                 | 2,645                                 | 28.65   | 7,430   | 23  | 47.48  | 73.58  |
| Vermont.....              | 223                                   | 7.02  | 610   | 6   | 69.34  | 47.75  |
| Virginia.....             | 2,102                                 | 5.22  | 13,725  | 11  | 34.99  | 38.32  |
| Washington.....           | 1,359                                 | 14.15   | 5,827   | 20  | 39.64  | 58.98  |
| West Virginia.....        | 2,553                                 | 7.04  | 18,458  | 14  | 23.49  | 49.50  |
| Wisconsin.....            | 5,779                                 | 23.68   | 7,528   | 12  | 67.97  | 106.64   |
| Wyoming.....              | 1,691                                 | 18.82   | 7,538   | 21  | 52.73  | 41.61  |
| District of Columbia..... |                                       |   | 6   |   |  |  |

<sup>1</sup> The percentage exceeds 100 because the number of farms reporting purebred bulls of all ages is greater than the number of farms reporting beef bulls over 1 year old.

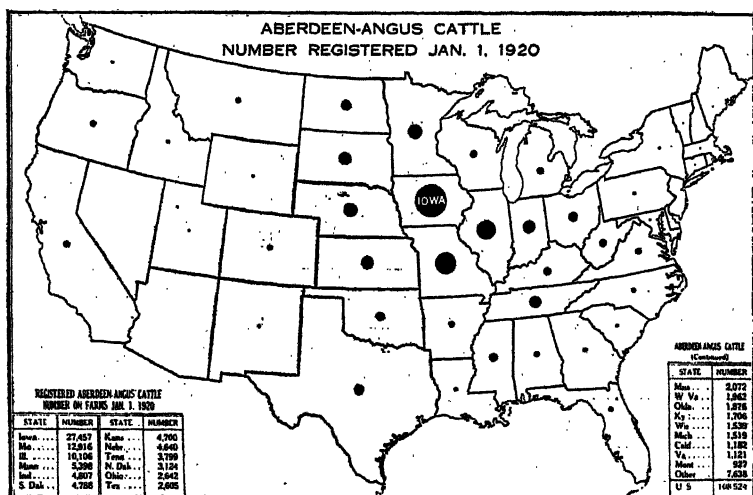


FIG. 14.—Most of the purebred Aberdeen-Angus cattle are in the Corn Belt. Iowa has over one-fourth of the total number in the United States. Missouri and Illinois possess nearly another fourth. The very small number in the Rocky Mountain and Pacific States is noteworthy. The number of cattle in the State is represented by the area, not the diameter, of the circle.

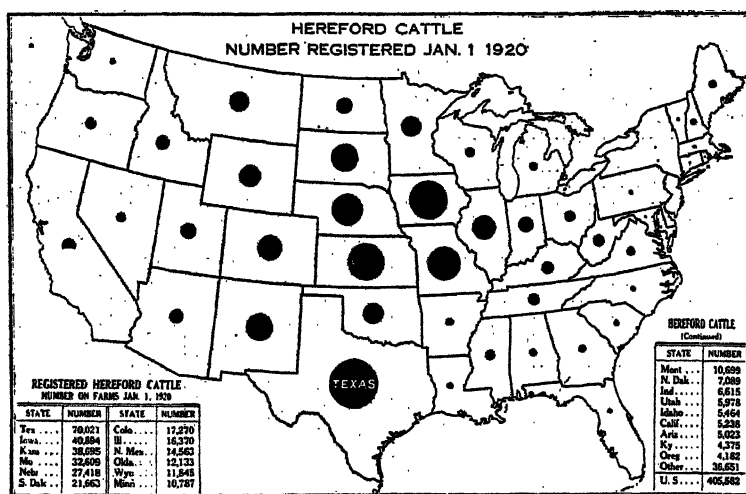


FIG. 15.—Nearly three-fourths of the total number of purebred Hereford cattle in the United States are in the western Corn Belt and the Great Plains region. There are more purebred Herefords in the Rocky Mountain and Intermountain States than of all other breeds of beef cattle. Herefords are good "rustlers," and are especially adapted to semiarid conditions.

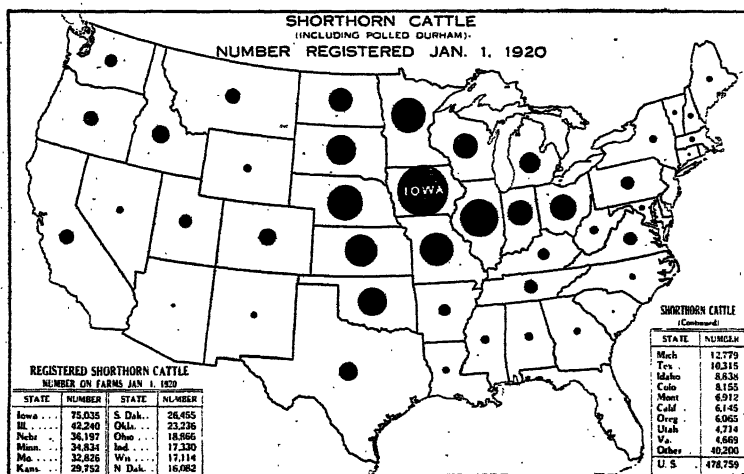


FIG. 16.—Three-fourths of the purebred Shorthorn (including polled Durham) cattle are in the Corn Belt, the Lake States, and the Dakotas. Shorthorns are more numerous than other breeds of beef cattle in the northern and the eastern portions of the Corn Belt and in the dairy States. About one-third of the purebred beef cattle in Kansas are Shorthorns, about one-half in Nebraska and Iowa, two-thirds in Illinois and Minnesota, and three-fourths in Wisconsin, Michigan, and Ohio.

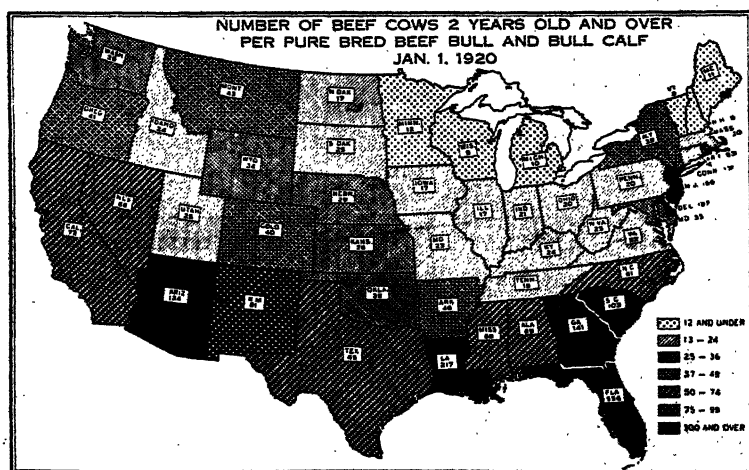


FIG. 17.—Among the important beef cattle regions, the Corn Belt, the Dakotas, Idaho, and Utah are best supplied with purebred beef bulls. The Southern and Southwestern States in particular need a great many more purebred bulls. The dairy districts of the Northwestern and Lake States show fewer beef cows per purebred beef bull, largely because the beef herds are small and scattered. The statistics include beef bulls of all ages.



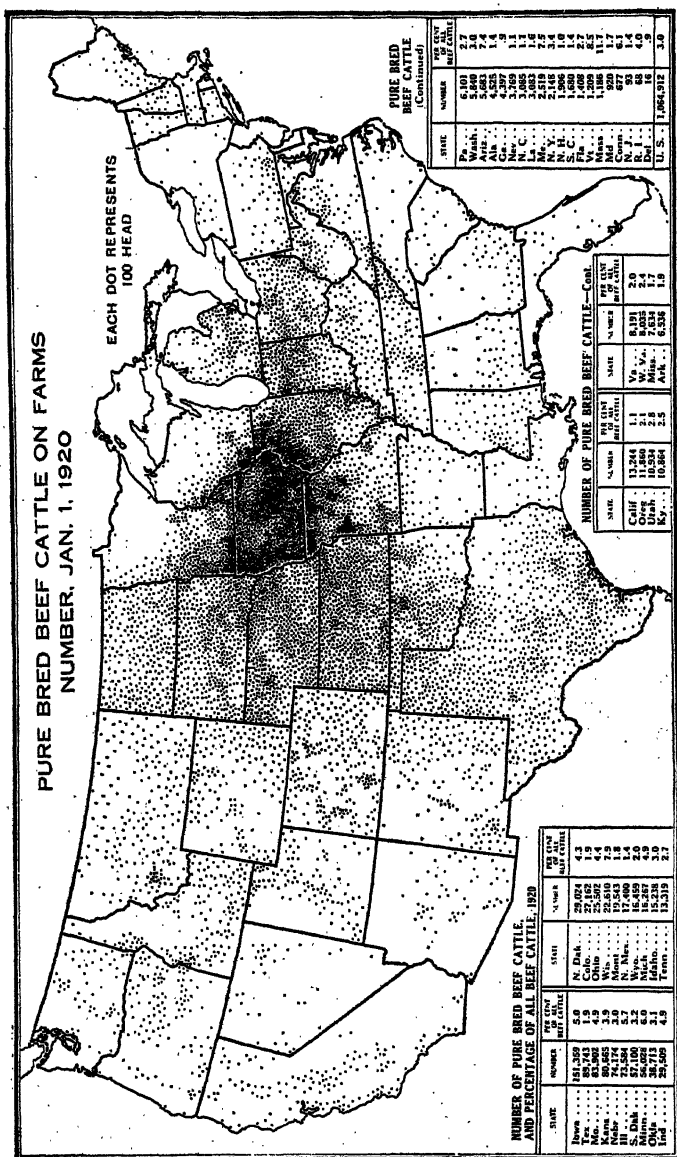


FIG. 18.—Three-fourths of the registered purebred beef cattle in the United States are in a triangular area, the points of which are located in central Ohio, central Texas, and northwestern North Dakota. This is the region of abundant and cheap grain and forage. Iowa is the heart of this area, and in 1920 had one-seventh of all the purebred beef cattle in the United States. Compare this map with Figure 21 and note how much more concentrated in Iowa and adjacent areas purebred beef cattle are than total beef cattle. The very small number of purebred beef cattle in the Cotton Belt, the Atlantic States, and the Upper Lakes region is noteworthy.

## Areas of Beef Production.

For convenience in classifying and discussing beef production, the United States is usually divided into four areas: The Western Range, the Cotton Belt, the Appalachian and Great Lakes Region, and the Corn Belt, as shown in Figure 20. While many beef cattle are raised in all these areas, as Figures 21 to 27 show, and some are fattened for slaughter in all of them, either on grain or grass, the Corn Belt is classified as the fattening area, while the others are considered breeding areas for the production of



FIG. 19.—A drove of good range bulls with the cow herd in the background. Range bulls should be separated from the breeding herd and fed well during the winter so that they will be in good condition for the breeding season.

stockers and feeders. The adaptability of these regions for beef cattle and the feed requirements or feed used for maintenance and fattening in these regions are very briefly outlined. Much more complete information is given in bulletins published by the department. Some of these bulletins are listed later.

*The Western Range.*—Less than one-half of the Western Range is privately owned; the rest is unreserved public land, used as free range, State land, and forest, Indian, and mineral reservations. The grazing area on the National Forests in the Western Range region for the season of 1921 supported 2,347,308 cattle and horses and 8,337,356 sheep and goats.

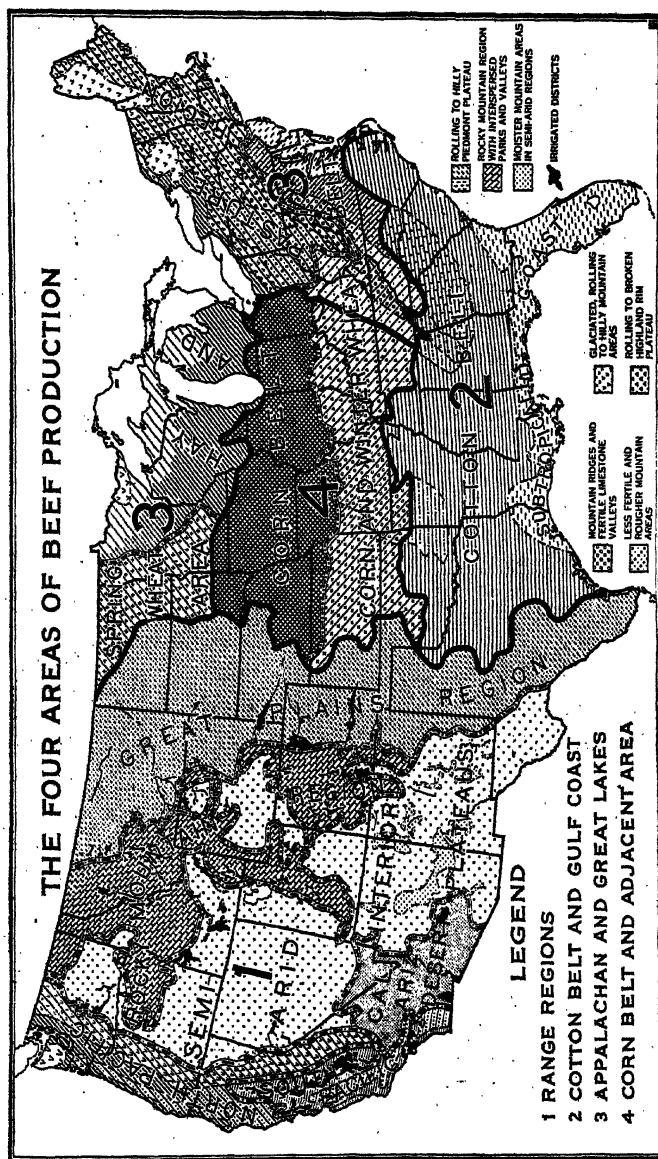


FIG. 20.—The Western Range, being mostly semiarid, is devoted largely to grazing cattle. In the Cotton Belt cattle are raised chiefly on wooded and other unfitted land. Along the Subtropical Coast, largely cut-over pine land and prairies, many cattle are raised in large herds under almost range conditions. In the Appalachian and Great Lakes region cattle are raised in small herds, the cows being kept for milk as well as for their calves. In this region many cattle are fattened on grass alone. The Corn Belt is the principal region for the fattening of cattle. Large numbers are shipped in from the ranges of the West and Southwest.

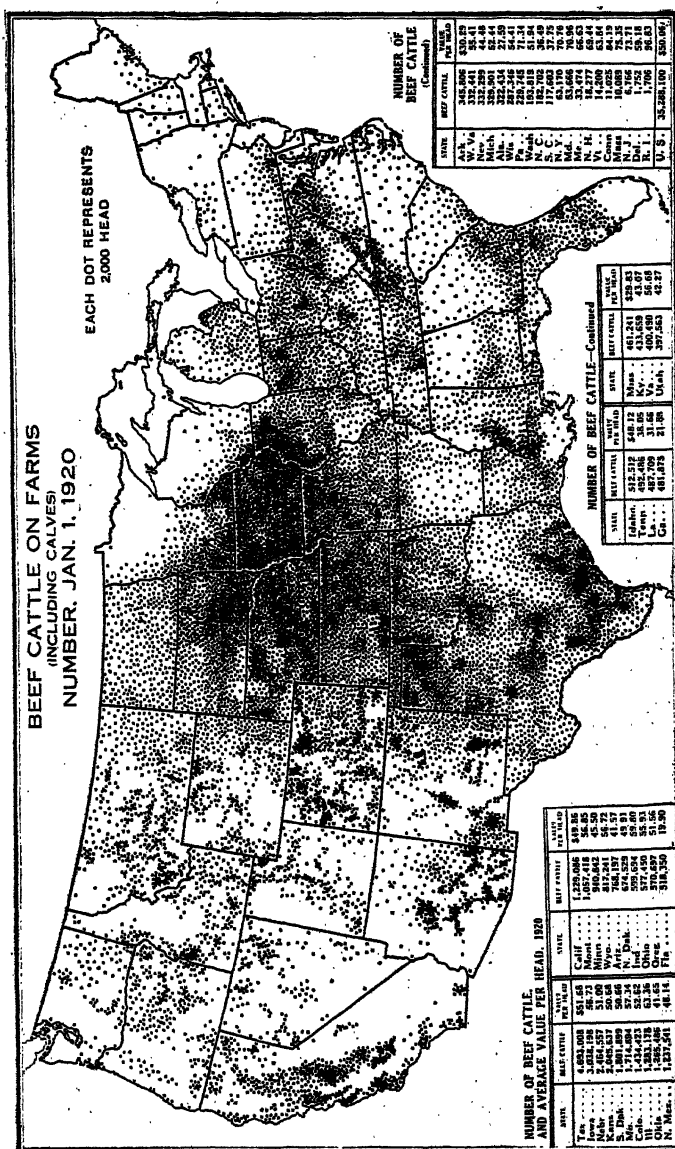


Fig. 21.—Most of the beef cattle in the United States are in that region which was formerly covered with prairie and grain grasses. Pasture supplies summer feed (see Figs. 28 and 29), while the principal winter feeds are corn and sorghum, milage and forage (see Figs. 36 and 37), leguminous hays, especially alfalfa (see Fig. 40), wild hay (see Fig. 38) and timothy and other tame grass hays (see Fig. 39). About 40 per cent of the beef cattle are in the Western Range regions, 35 per cent in the Corn Belt and adjacent area, 15 per cent in the Cotton Belt and Subtropical Coast, and 10 per cent in the Appalachian and Great Lakes regions.

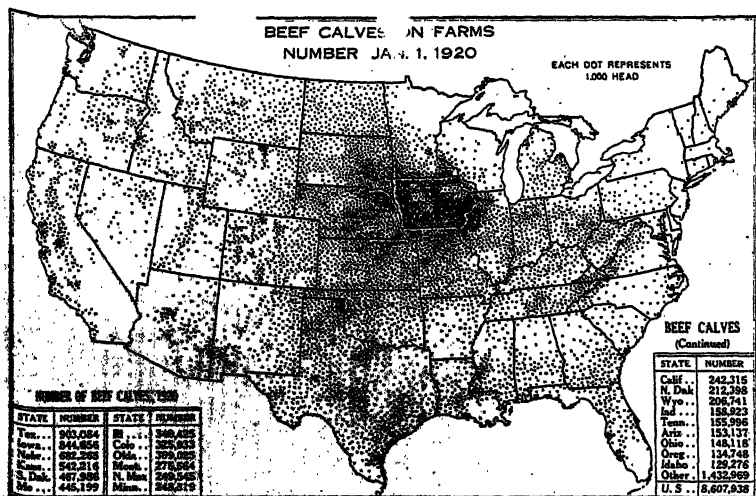


FIG. 22.—Most of the beef calves are on the plains from North Dakota to Texas and in the western part of the Corn Belt. The large number in the western part of the Corn Belt includes many calves which have been shipped in from the Southwest to feed. The total number in the United States on January 1, 1920, was 8,607,938. (Compare with Fig. 26.)

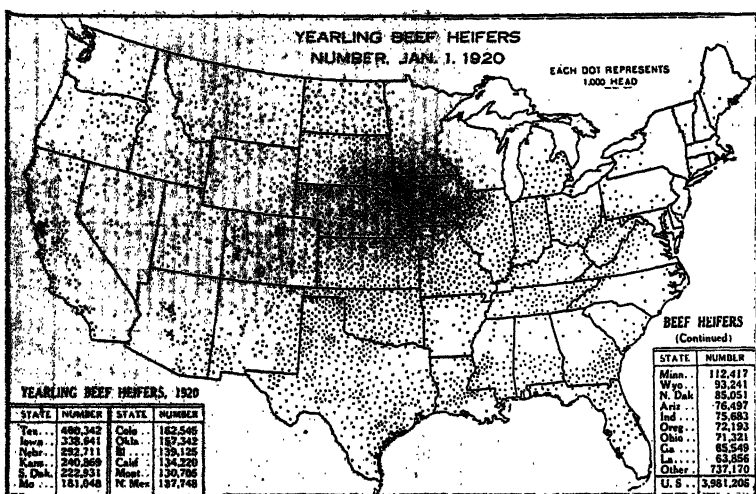


FIG. 23.—There are scarcely half as many yearling heifers as beef calves, shown in Figure 22. In the heart of the Corn Belt there are 40 per cent as many yearling heifers as calves, whereas in the eastern Cotton Belt and Gulf Coast there are 60 per cent. The geographic distribution of yearling heifers is similar to that of the calves. The total number on January 1, 1920, was 3,981,265.

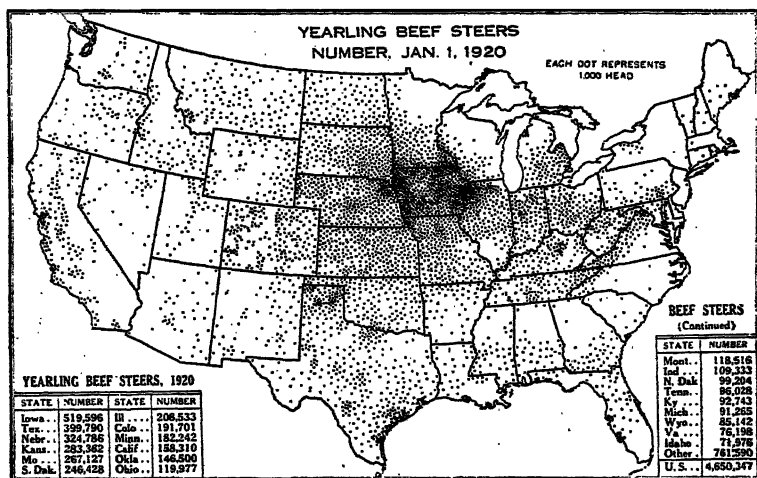


FIG. 24.—There is a much greater concentration of yearling beef steers than yearling beef heifers in the western part of the Corn Belt. (See Fig. 23.) This is explained by the large number that are shipped into the Corn Belt annually for fattening. For the United States as a whole there were about 17 per cent more steers than heifers, the total number on January 1, 1920, being 4,650,347.

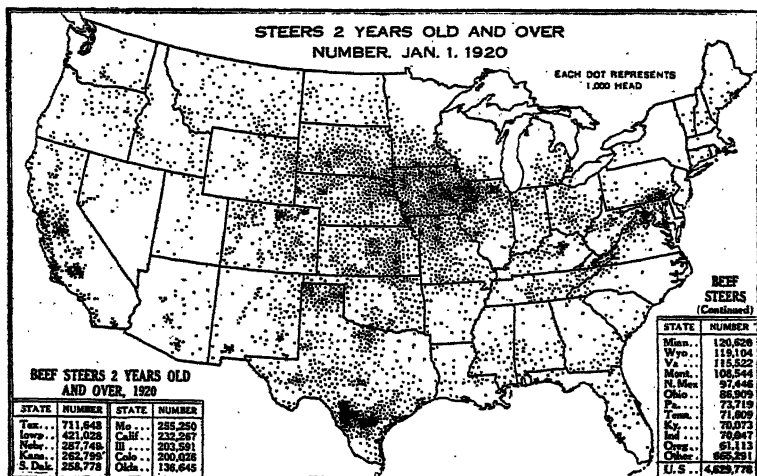


FIG. 25.—The concentration of steers 2 years old and over in certain small feeding areas in the western portion of the Corn Belt is noteworthy. Other feeding centers should be noted in the limestone valleys that extend from southeastern Pennsylvania to eastern Tennessee, in the blue-grass district of Kentucky, in southern Texas and the northern Panhandle, in the sugar beet districts along the North and the South Platte Rivers, and in the San Joaquin Valley in California. The total number in the United States, 4,629,778, was about the same as of yearlings.

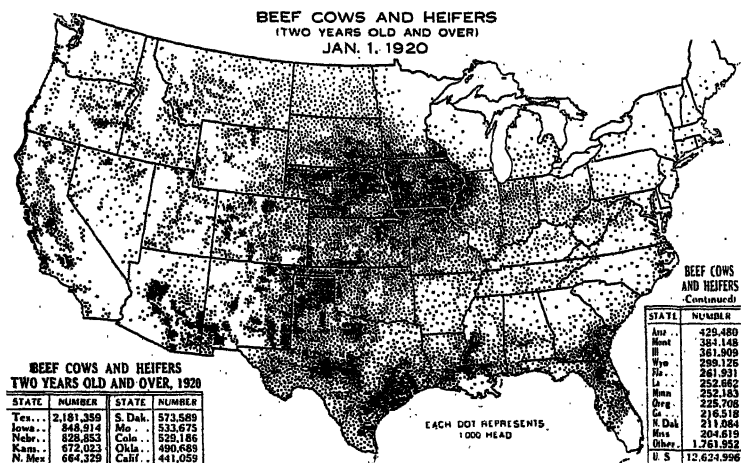


FIG. 26.—The most important breeding grounds of beef cattle are the western portion of the Corn Belt; the Great Plains, especially western Texas and eastern New Mexico and Colorado; the valleys and high plateaus of the far West; and the subtropical coast from Texas to Georgia. Notably sparse are the number of beef cows in the Cotton Belt and in the dairy region of the North Atlantic and Lake States. The total number of beef cows and heifers 2 years old and over was 12,624,996.

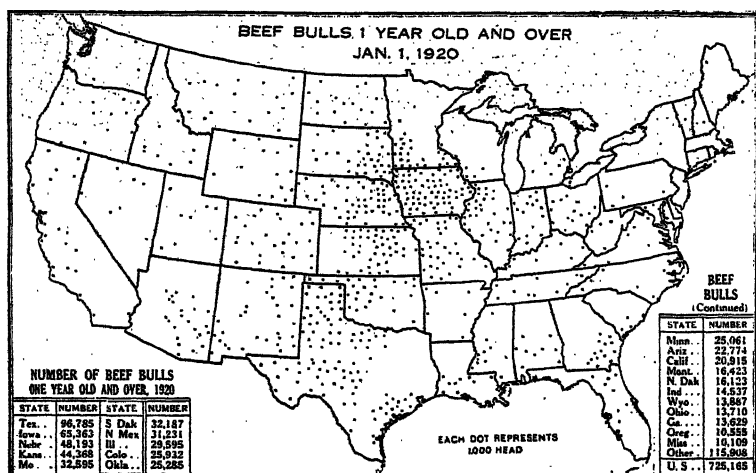


FIG. 27.—The geographic distribution of beef bulls, as one might expect, is similar to that of beef cows; but there is a much larger number of cows per bull in the West than in the East. (See Fig. 17.) In Michigan, Ohio, Kentucky, and Tennessee there were about 10 beef cows and heifers 2 years old and over per bull, in Illinois and Iowa about 13, in Texas and Oklahoma about 20, and in the Rocky Mountain and Pacific States from 20 to 25. The total number of beef bulls in the United States was 725,165, which gives an average of 17 cows per bull.

Owing to the great diversity of topography, soil, rainfall, and temperature in the Western States it is very difficult to classify the range according to its carrying capacity. In areas of equal carrying capacity there is often a considerable variation in the length of the grazing season on account of variations in altitude. However, the Western States have been divided into the 25 areas given in Table 2. Within these areas the bulk of the range falls within reasonably definite limits as to carrying capacity and length of the grazing season, the season being shorter in the higher altitudes which are used for summer grazing, as shown in Figures 28 and 29. The lower altitudes are used for winter grazing, which is supplemented with hay when the range is covered with snow. In the southern part of the Western Range the cattle are grazed during the winter, usually without supplemental feeds.

TABLE 2.—*Character of forage and estimated capacity of the western grazing areas of the United States.*

| Areas.   | Chief forages.   | Length of season. | Area to support a cow. |
|--|--|-------------------|------------------------|
|  |  | Months.           | Acres                  |
| Northern Great Plains.....                               | Grama, grama-buffalo, wheat grass.                     | 5 to 8            | 15 to 25               |
| Southern Great Plains.....                               | Grama-buffalo.....                                     | 5 to 10           | 15 to 25               |
| Black Hills.....   | Grama, short grasses.....                              | 3 to 5            | 25 to 30               |
| Central Rocky Mountains.....                             | Mountain weeds and grass.....                          | 3 to 5            | 20 to 25               |
| New Mexico-Arizona mountains.....                        | Grama grass, browse.....                               | 6 to 12           | 25 to 30               |
| West-central and northwestern Montana.                   | Pine grass.....  | 3 to 7            | 35 to 40               |
| Southwestern Montana.....                                | Short grasses.....                                     | 3 to 6            | 20 to 25               |
| Northern Rocky Mountains.....                            | Bunch grass, browse.....                               | 3 to 6            | 60 to 150              |
| Central Idaho.....                                       | Bunch grass, weeds, browse.....                        | 3 to 7            | 25 to 30               |
| Wasatch, Uinta, and Wyoming Mountains.                   | Grass, browse.....                                     | 3 to 7            | 20 to 25               |
| Northeastern Nevada, southern Idaho, and central Oregon. | Bunch grass, sagebrush.....                            | 4 to 8            | 35 to 40               |
| East-central Nevada mountains.....                       | Bunch grass, browse.....                               | 4 to 6            | 25 to 50               |
| Wyoming semideserts.....                                 | Sagebrush, shadscale, greasewood, short bunch grasses. | 2 to 4            | 50 to 100              |
| Utah-Arizona deserts.....                                | Browse.....  | 2 to 5            | 75 to 150              |
| New Mexico-Arizona foothills.....                        | Browse, tobosa, grama grass.....                       | 4 to 8            | 30 to 60               |
| San Luis Valley of Colorado.....                         | Greasewood, salt and short grass.                      | 7 to 9            | 30 to 40               |
| Utah foothills and valleys.....                          | Sagebrush, bunch, salt, and June grasses.              | 5 to 7            | 25 to 30               |
| Mohave Desert <sup>1</sup> of California.....            | Annual weeds, browse.....                              |                   | 640                    |
| Nevada semideserts.....                                  | Shadscale, greasewood, browse.                         | 1 to 4            | 75 to 150              |
| Southeastern Oregon and Snake River plains.              | Sagebrush and bunch grass.....                         | 2 to 5            | 50 to 100              |
| Columbia River Basin.....                                | Bunch grass.....                                       | 7 to 9            | 10 to 30               |
| Eastern California mountains.....                        | Browse and bunch grass.....                            | 3 to 6            | 25 to 35               |
| Western Oregon mountains.....                            | Browse.....  | 3 to 7            | 75 to 100              |
| Southwestern California mountains.....                   | Browse.....  | 6 to 12           | 40 to 60               |
| California-Oregon mountain valley.....                   | Grass and weeds.....                                   | 6 to 8            | 10 to 25               |

<sup>1</sup> The grazing season on the Mohave Desert depends on the availability of water for the cattle.



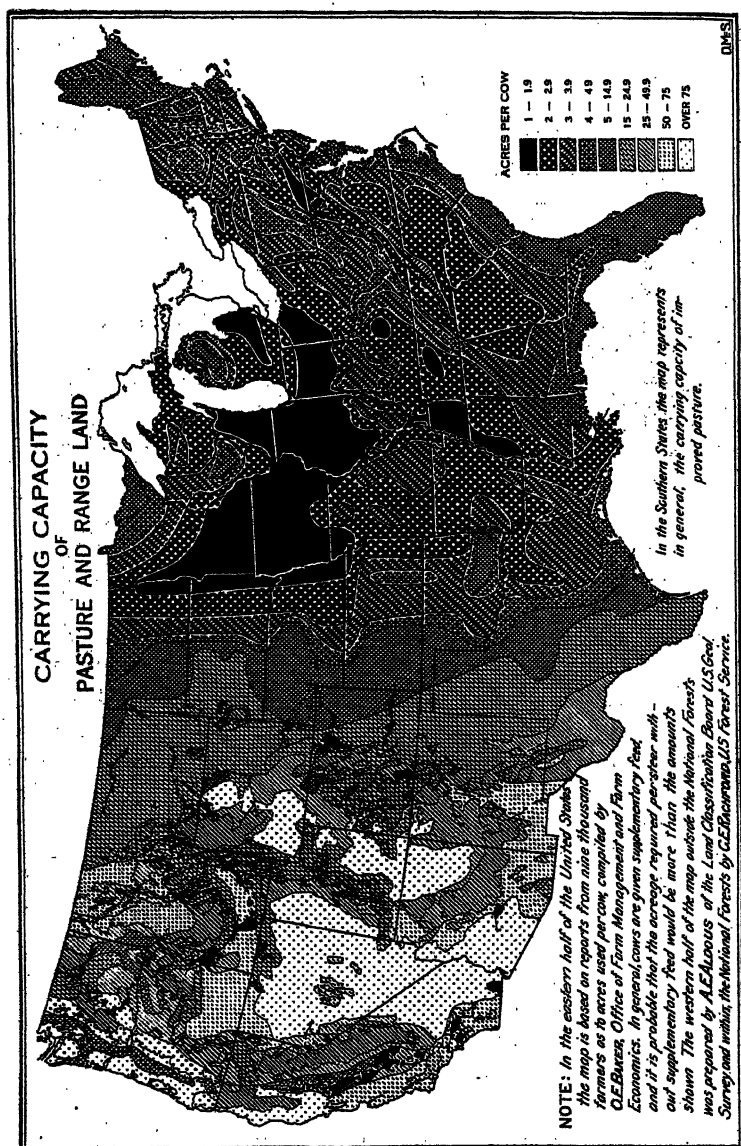
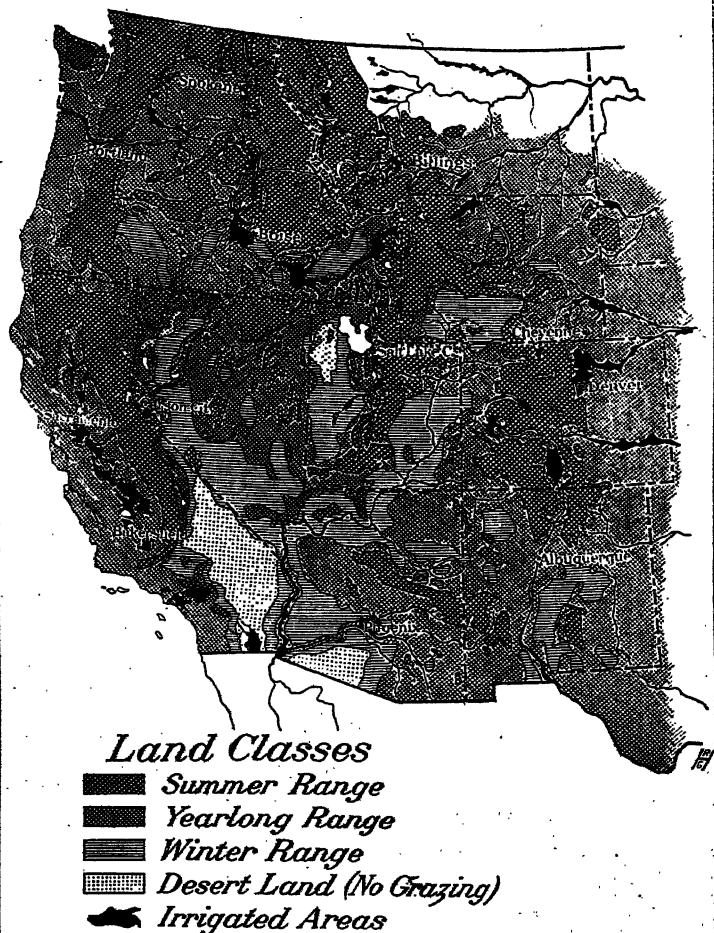


FIG. 28.—During the summer season most of the beef cattle in the United States are kept on pasture. The acreage of pasture in the United States is two and a half times that of all crops, and its value in the production of beef cattle probably is equal to that of all crops. There are about 70 million acres of improved pasture and probably 150 million acres of unimproved pasture in farms, 200 million acres of woodland pasture in farms and in the national forests, and about 500 million acres of arid or semi-arid open range land in the West. The carrying capacity indicated on the map is an average of the different kinds of pasture occurring in the locality, and represents only the land actually used for pasture.

## WESTERN RANGE GRAZING SEASON AREAS



ADAPTED FROM MAP PREPARED BY ALBERT F. POTTER, U.S. FOREST SERVICE

FIG. 29.—In the summer the cattle in the West near the mountains are commonly driven up into the national forests, which contain large areas of open grass land and parks, as well as abundant browse. In the Great Plains region, in western New Mexico and Arizona, and in the Pacific States, also in much of Nevada, cattle are grazed the year round on the range, commonly with supplementary winter feed. The winter range is mostly desert and used more largely for grazing sheep than cattle. Many cattle are fattened in the irrigated areas. The map, originally prepared by A. F. Potter, formerly of the Forest Service, has been revised by O. C. Stine, Bureau of Agricultural Economics. It does not extend to the eastern boundary of the range area, which is about 200 miles farther east. Nearly all this area not shown is yearlong pasture.

*The Cotton Belt.*—In considering the beef-cattle industry of the Cotton Belt, certain areas where cotton is not the chief crop are included, such as the mountainous regions of Alabama, Georgia, Arkansas, and Oklahoma, and the prairies of southern Florida, Louisiana, and southern Texas. On the prairies the cattle are handled in large herds, somewhat as they are in the Western Range, but in the Cotton Belt proper there are commonly only a few cattle on each farm. Grazing throughout the year can usually be depended upon. In this region the production of Brahman cattle is becoming well established. They are growthy, prolific, stand the heat and

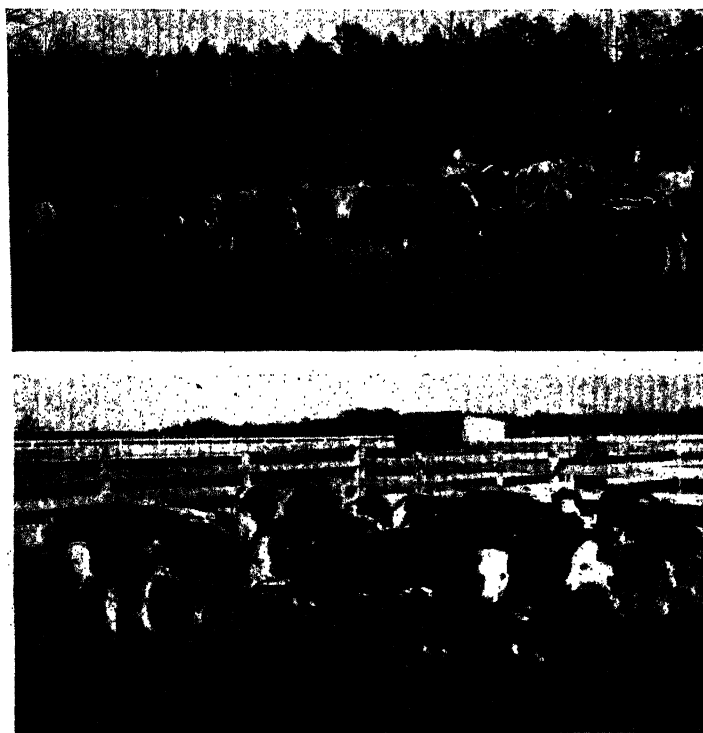


FIG. 30.—The upper picture shows a purebred beef bull, scrub cows, and first and second cross cows and calves in a Cotton Belt herd. The lower picture shows a drove of second-cross calves which were produced by such a grading-up process. A pressing need in the South is more purebred beef cattle. (See Fig. 17.) A general grading up of the quality of the cattle in the South would greatly increase the productivity and profitableness of the industry.

parasites better, and are more resistant to Texas-fever ticks than other cattle.

On the cut-over pine lands of the coastal plains, extending from North Carolina to Texas, most of the cattle run on the range the year around. It requires from 5 to 20 acres of such pasture per cow. The chief grasses are wire grass and broom sedge, which have a low feeding value. The



FIG. 31.—Brahman bulls in the tick-infested portions of southern Texas and the Gulf Coast region have proved valuable for crossing with the native beef cattle. Immunity from Texas fever extends normally to cattle having as little as one-eighth Brahman blood. As the tick is exterminated purebred bulls of other breeds should be introduced.



FIG. 32.—Piney woods steers make good oxen of considerable size for use in lumbering when they are well fed. The virgin longleaf pine forests, such as are shown in this picture, are being rapidly used up. This cut-over land should be utilized to the best advantage. The best of it may be used for crops, but the greater part is better suited for grazing, and the remainder is fit only for reforestation.

cattle do well until about midsummer, after which time they scarcely hold their own unless improved pastures are available. The best grasses known to improve the piney-woods pasture are Bermuda for the richer soils, carpet grass for the moist flatwoods, and Natal grass for the drier, poorer soils. Lespedeza (Japanese clover) is a good pasture and hay crop throughout most of this area.

In central Texas and Oklahoma cattle are raised on large fenced pastures, which are supplemented during the winter with cottonseed cake, hay, and grain sorghums. On cotton plantations the cattle are kept on woodland pasture and abandoned cotton fields and stalk fields. The chief forage plants are lespedeza and Bermuda grass.

In the Ozarks and the mountainous parts of northern Alabama and Georgia most of the cattle are raised on small farms. The cattle are wintered chiefly on corn and cotton stalk fields, stover, hay, corn silage, and cottonseed meal.

*Quantities of Feed Used in the Cotton Belt.*—Table 3 is based upon records kept on 1,383 head of cattle. To find

TABLE 3.—*The amounts of feed used per 1,000 pounds live weight for wintering cows, calves, yearlings, and 2-year-old steers in the Cotton Belt.*

| Number in tests. | Location and class of cattle.  | Feeding period. | Average initial weight. | Gain (+) or loss (−) in weight per head. | Feed per 1,000 pounds live weight. |         |                        |                                |            |                                  |
|------------------|--------------------------------|-----------------|-------------------------|--|------------------------------------|---------|------------------------|--------------------------------|------------|----------------------------------|
|                  |                                |                 |                         |  | Protein meal.                      | Grain.  | Legumes and mixed hay. | Stover, coarse hay, and straw. | Silage.    | Stalk fields and winter pasture. |
| 63               | In Arkansas:<br>Cows.....      | Days. 150       | Lbs. 913                | Lbs. +35                                 | Lbs. 252                           | Lbs. 57 | Lbs. 686               | Lbs. 778                       | Lbs. 3,827 | 1 acre. <sup>(1)</sup>           |
| 261              | In Mississippi:<br>Cows.....   | 94              | 808                     | −53                                      | 249                                | .....   | 686                    | 303                            | 15         | 2 5.24                           |
| 68               | Calves.....                    | 118             | 381                     | +28                                      | 399                                | 375     | 908                    | 321                            | 475        | 2 2.04                           |
| 46               | In Tennessee:<br>Yearlings.... | 126             | 563                     | +1                                       | 308                                | .....   | .....                  | 382                            | 4,128      | .....                            |
| 35               | In Alabama:<br>Yearlings....   | 115             | 616                     | +71                                      | 439                                | .....   | 2,392                  | .....                          | .....      | .....                            |
| 235              | 2 to 3 year olds               | 99              | 674                     | −35                                      | 94                                 | .....   | .....                  | 580                            | .....      | ( <sup>1</sup> )                 |

<sup>1</sup> On scant pasture and stalk fields, 44 days of feeding period in fall and spring.

<sup>2</sup> On cotton or corn stalk fields, all of winter feeding period.

<sup>3</sup> Average is approximate and consisted principally of winter oats, wheat, and early spring clover pasture.

<sup>4</sup> On open range pasture all of winter feeding period.

the amount of feed required for cattle of any weight, divide the amounts of feed in the table by 1,000 and multiply the results by the weight of the cattle to be fed. From the map (Fig. 28) one can determine the acreage of improved pasture required for the remainder of the year.

Formerly, practically the only ration used for dry-lot fattening of steers was cottonseed meal and cottonseed hulls. Now, much silage, both sorghum and corn, velvet beans, rice by-products, blackstrap molasses, and considerable legume

TABLE 4.—The amounts of feed used per 100 pounds gain to fatten steers, classified by weight (300-600 pounds, 600-900 pounds, and 900 pounds upward), in the Cotton Belt.

| Number in tests. | Feeding methods.                              | Feeding period. | Average initial weight. | Total gain per head. | Protein meal fed. | Grain. | Legume and mixed hay. | Stover, coarse hay, straw, and hulls. | Silage. | Molasses. |
|------------------|---|-----------------|-------------------------|----------------------|-------------------|--------|-----------------------|---------------------------------------|---------|-----------|
|                  | Dry-lot feeding:                              | Days.           | Lbs.                    | Lbs.                 | Lbs.              | Lbs.   | Lbs.                  | Lbs.                                  | Lbs.    | Lbs.      |
| 728              | Without silage...                             | 120             | 467                     | 195                  | 181               | 159    | 118                   | 383                                   | 626     | 0.2       |
| 791              | .....do.....                                  | 96              | 820                     | 174                  | 247               | 147    | 51                    | 991                                   | .....   | 14.0      |
| 1,079            | With silage.....                              | 117             | 780                     | 221                  | 247               | 144    | 18                    | 170                                   | 1,655   | 7.0       |
| 604              | .....do.....                                  | 102             | 1,000                   | 179                  | 336               | 283    | 47                    | 636                                   | 868     | 7.0       |
|                  | On summer pasture in Alabama and Mississippi: |                 |                         |                      |                   |        |                       |                                       |         |           |
| 65               | No supplement.....                            | 130             | 500                     | 210                  | .....             | .....  | .....                 | .....                                 | .....   | .....     |
| 192              | With cottonseed cake...                       | 133             | 532                     | 226                  | 202               | .....  | .....                 | .....                                 | .....   | .....     |
| 171              | No supplement.....                            | 130             | 660                     | 208                  | .....             | .....  | .....                 | .....                                 | .....   | .....     |
| 338              | With cottonseed cake...                       | 128             | 674                     | 232                  | 217               | .....  | .....                 | .....                                 | .....   | .....     |
| 93               | Cottonseed cake and corn.....                 | 154             | 504                     | 226                  | 112               | 197    | .....                 | .....                                 | .....   | .....     |
| 59               | Cottonseed cake and alfalfa.....              | 101             | 532                     | 162                  | 236               | .....  | 119                   | .....                                 | .....   | .....     |
|                  | On summer pasture in western North Carolina:  |                 |                         |                      |                   |        |                       |                                       |         |           |
| 545              | No supplement.....                            | 143             | 704                     | 321                  | .....             | .....  | .....                 | .....                                 | .....   | .....     |
| 98               | With cottonseed cake...                       | 131             | 704                     | 361                  | 135               | .....  | .....                 | .....                                 | .....   | .....     |

hay are used (see Figs. 36 to 40). Table 4 shows the amounts of feed required to fatten steers in the Cotton Belt, based on records kept on 4,763 head. As the amount of feed required per 100 pounds gain increases appreciably with the age of the steers, they have been classified by initial weight (definite age records not being always available), as follows: 300 to 600 pounds, 600 to 900 pounds, and 900 pounds upward. The 600 to 900 pound steers were divided to show the amounts of feed required in rations with and without silage. To obtain the feed required per steer, divide the amounts of feed in the table by 100 and multiply the result by the total gain per steer.

*The Appalachian and Great Lakes Region.*—In this region feeding records are from the upland limestone pastures of Virginia, West Virginia, and North Carolina, which supply grass-fat steers to the eastern markets. Most of the cattle are produced on small farms. About one-third of this area is improved farm land. Much of the rest is too rough for profitable cultivation, but can be cleared and used as pastures for beef cattle. From 2 to 10 acres will fatten a steer or carry a cow and her calf for seven to nine months. Cattle are wintered on stover, hay, corn, silage, and

TABLE 5.—*Amounts of feed used per 1,000 pounds live weight to winter cattle in the Appalachian Region.*

| Number of tests. | Class of cattle.                         | Feeding period. | Initial weight. | Total gain per head. | Feed required per 1,000 pounds live weight. |       |             |            |              |             |              |
|------------------|--|-----------------|-----------------|----------------------|---|-------|-------------|------------|--------------|-------------|--------------|
|                  |  |                 |                 |                      | Cottonseed meal.                            | Corn. | Wheat bran. | Mixed hay. | Wheat straw. | Shock corn. | Corn silage. |
|                  |  | Days.           | Lbs.            | Lbs.                 | Lbs.  | Lbs.  | Lbs.        | Lbs.       | Lbs.         | Lbs.        | Lbs.         |
| 120              | In West Virginia:                        |                 |                 |                      |   |       |             |            |              |             |              |
|                  | Cows.....                                | 132             | 827             | +13                  | 80  | ..... | .....       | 843        | 636          | 184         | 3,445        |
| 90               | Calves.....                              | 134             | 384             | +66                  | 130   | 182   | 65          | 1,023      | .....        | .....       | 2,857        |
| 130              | Yearlings.....                           | 130             | 665             | +11                  | 68  | ..... | .....       | 1,119      | 648          | .....       | 2,859        |
| 120              | Two-year olds..                          | 127             | 955             | +46                  | 55  | ..... | .....       | 621        | 121          | .....       | 3,314        |
|                  | In North Carolina:                       |                 |                 |                      |   |       |             |            |              |             |              |
| 675              | Two to three year olds <sup>1</sup> .... | 123             | 745             | -38                  | 16  | 61    | .....       | .....      | 953          | .....       | 1,529        |

<sup>1</sup> One-fifth of these steers depended upon winter pasture, excepting for a period of about 2 weeks when snow covered the ground, while the other four-fifths had no pasture. The average number of days of pasture for all was 42.

cottonseed meal in the more productive sections of Pennsylvania, Maryland, Virginia, and West Virginia. There are

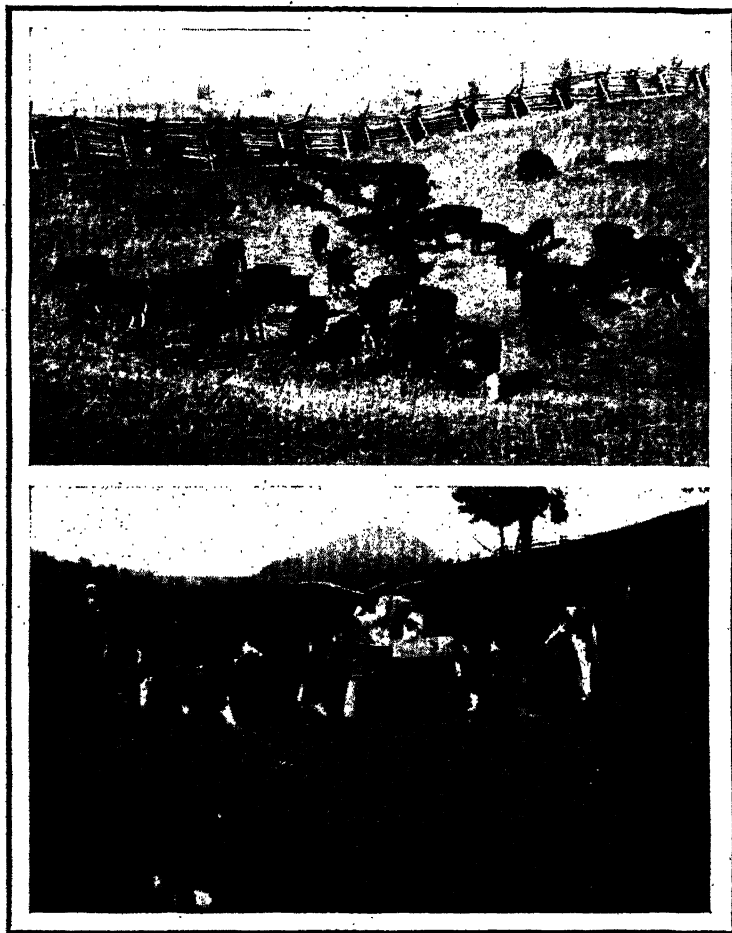


FIG. 33.—On the excellent blue-grass pastures in the central Appalachian region many steers are finished on grass alone for the eastern markets. In some instances either corn, cottonseed meal, or both, are fed to the steers on pasture. The upper picture shows cattle turned onto pasture in the middle of April. The lower shows cattle ready to market in September.



very few beef cattle in the Great Lakes part of this region (see Figs. 2, 14 to 18, and 21 to 27).

Table 5, based on records of 460 head, shows the quantities of feed required per 1,000 pounds live weight to keep cows, calves, yearlings, and 2-year olds through the winter feeding period. To convert the amounts of feed to feed per head, divide the quantities by 1,000 and multiply the result by the average weight of the cattle to be fed.

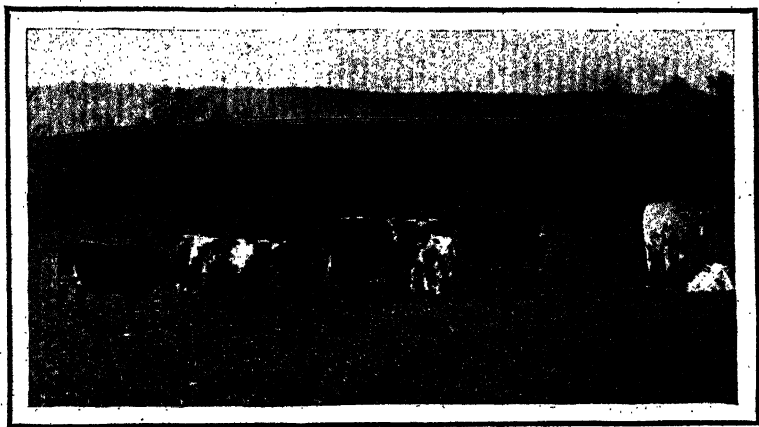


FIG. 34.—Many farmers in the Appalachian region keep a few cows such as these to produce milk for the family and raise good beef calves. The rich pastures in this region permit the production of cattle at a lower cost than where heavy feeding is necessary.

*The Corn Belt.*—In the Corn Belt over 25 per cent of the corn crop is fed to beef cattle. While there is relatively little land too rough for crop production, there is some land in almost every community which can be utilized for cattle pastures to advantage. Pasture furnishes practically all the feed for the breeding herds from May 1 or May 15 to November 15 or December 1 (see Fig. 28). Cornstalk fields are utilized during the early winter. Table 6 gives the quantities of feed, pasturage, and labor required for carrying cows, raising calves, and fattening baby beeves.

Most of the cattle fattened in the Corn Belt area are bought in the fall as 2-year-olds from the Western Range. They

are fed during the winter and spring months on home-grown feeds (see Figs. 36 to 40), and usually marketed before June 1, when the marketing of grass-fed cattle from the Southwest usually begins. In eastern Kansas, Nebraska, and western Iowa, corn, clover, and alfalfa are the chief feeds, while in Indiana and Illinois corn, mixed hay, silage, and a protein meal make up the standard ration. On farms having considerable rough land, the most economical gains are obtained by fattening on corn and grass. This

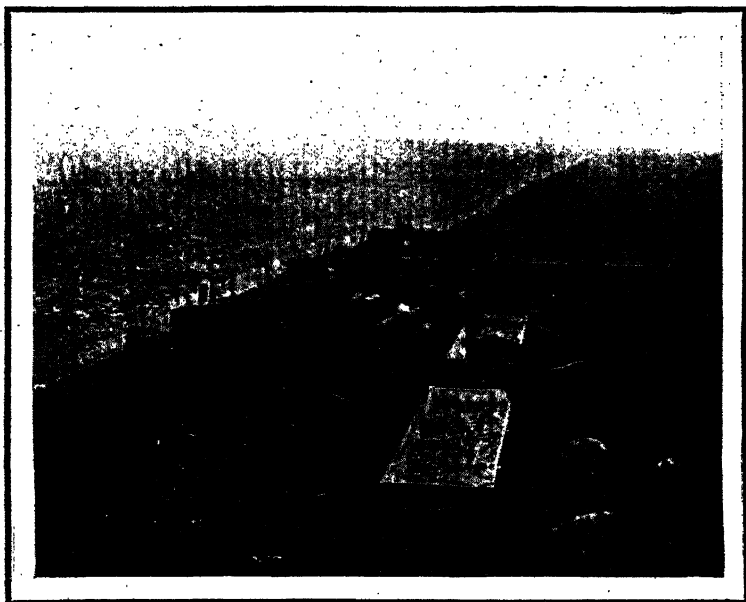


FIG. 35.—Steers in a Corn Belt feed lot. In a fattening period of 150 days such steers will eat a ton or more of dry roughage per head in addition to corn and other concentrates. In this way a large part of the hay, straw, and stover, for which there is no other market, is utilized profitably by converting it into beef.

is the most common method in Missouri. Central Kansas and southwestern Wisconsin are the chief areas for fattening cattle on grass alone. Table 7 gives the quantities of feed, labor, and pasturage required to produce 100 pounds of gain in the Corn Belt, based on the feeding of 54,979 cattle.

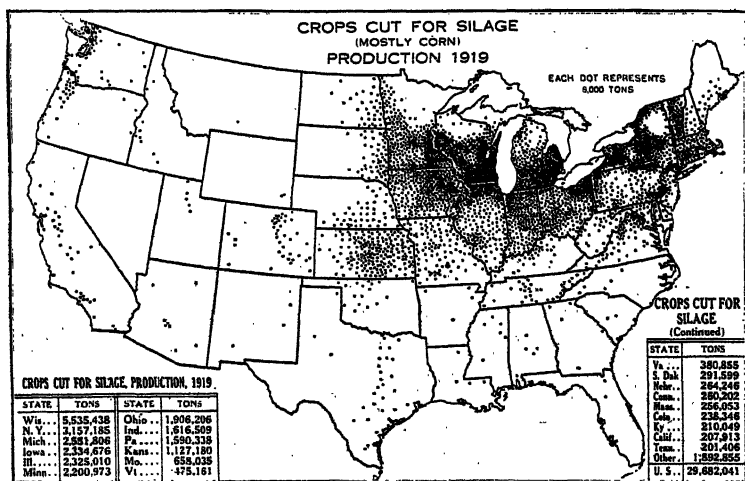


FIG. 36.—Nearly all the silage in the United States is made from corn. Most of this silage is fed to dairy cattle, but the use of silage for wintering beef cows and young cattle and for fattening steers is increasing rapidly, especially in the Corn Belt. The large amount of silage now produced in Iowa, Kansas, and eastern Colorado is noteworthy. Each dot on the map represents 6,000 tons, which is estimated as roughly equivalent to 2,000 tons of hay.

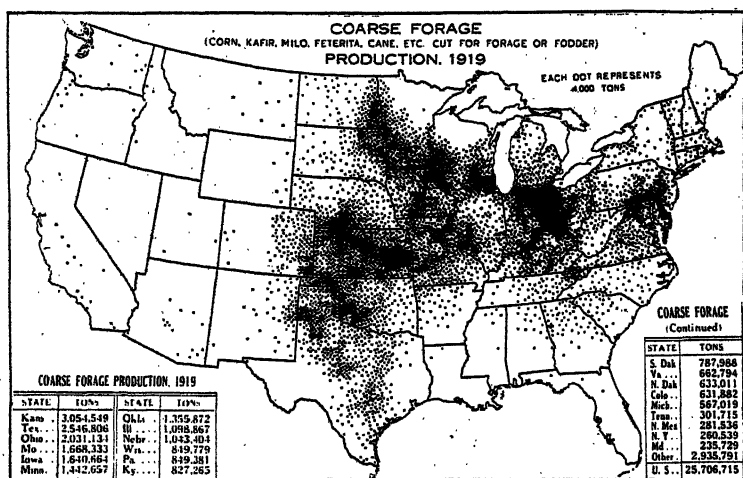


FIG. 37.—Corn is cut for forage very largely around the margin of the Corn Belt and in Kansas. In southwestern Kansas, western Oklahoma, and western Texas kafir and milo replace corn as a forage crop. Some of the forage shown in the south central and southern States is sweet sorghum. A large part of this coarse forage is used to feed beef cattle, especially in the region extending from Iowa to Texas. (See Fig. 21.)

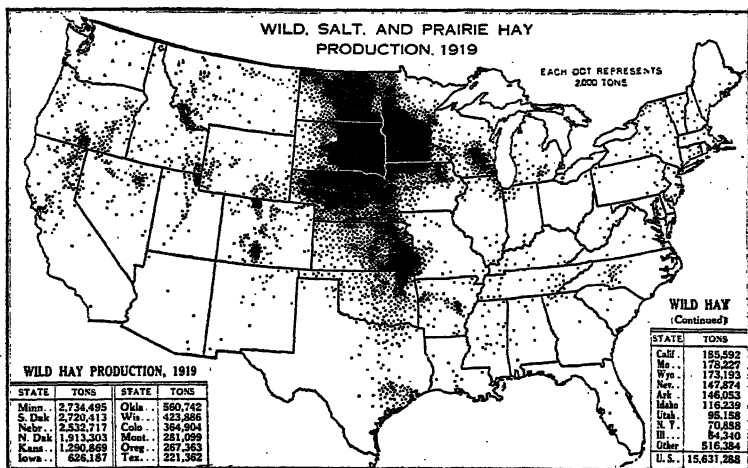


Fig. 38.—Wild or native hay is used very largely for wintering cattle in the Spring Wheat Region, the western portion of the Corn Belt, along the eastern margin of the Great Plains, and in the higher valleys and plateaus of the Western Range regions. (See Fig. 20.) These are regions having sufficient rainfall to produce a growth of native grass tall enough to cut for hay, but not sufficiently moist, especially in winter, to secure higher yields of clover, timothy, and other tame grasses. Supplemented by some feed rich in protein, these wild hays are quite satisfactory for wintering cattle.

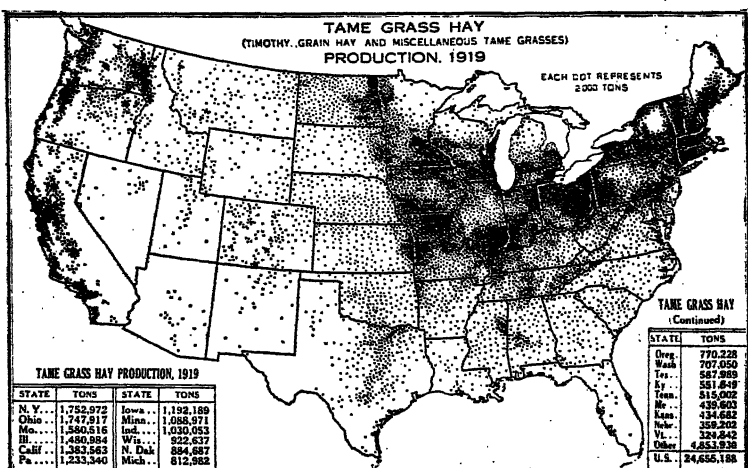


Fig. 39.—Most of the hay shown in the northeastern quarter of the United States is timothy. The much smaller amounts in the South are largely Bermuda and Johnson grass, while along the Pacific Coast grain hay is the leading variety. These hays also should be supplemented by some feed rich in protein, in order to bring cattle through the winter in good condition. These hays are not used extensively for feeding beef cattle. (See Fig. 21.)

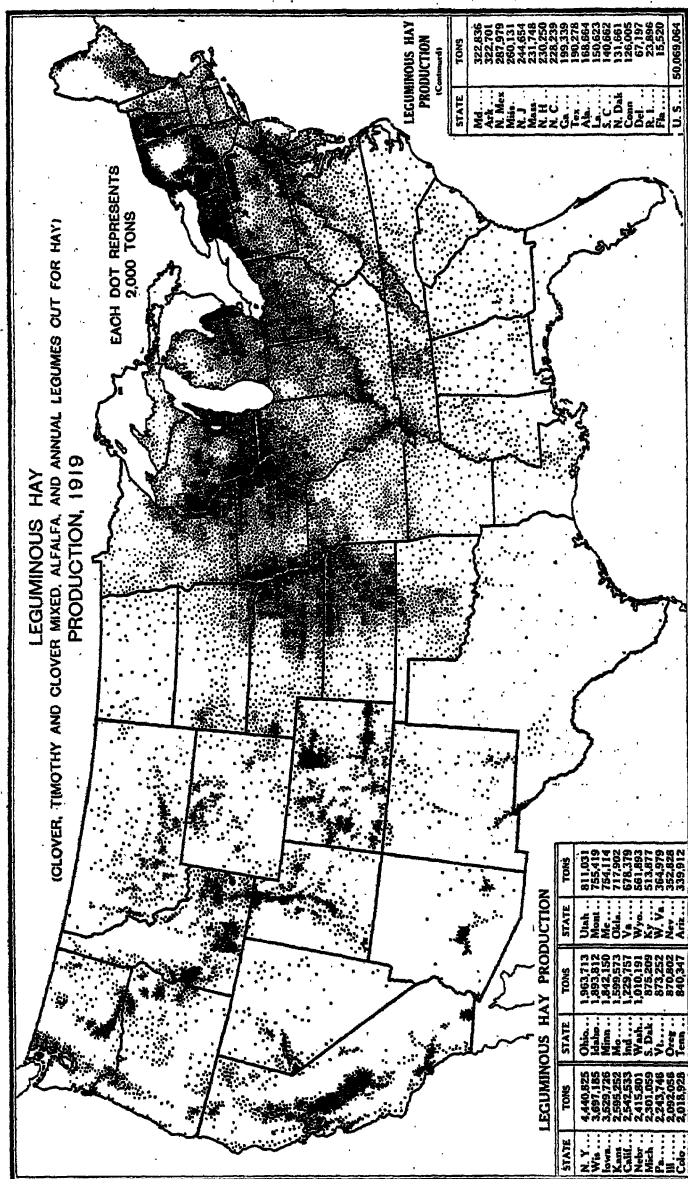


FIG. 40.—West of the Missouri River the leguminous hay is almost wholly alfalfa, east of the Missouri, and north of the Cotton Belt it is mostly timothy and clover mixed and clover alone. Clover includes red alsike and crimson clover and several other legumes of less importance. The scattered dots in the Cotton Belt represent mostly cowpeas and soy beans cut for hay and lespedeza. A large part of the alfalfa in the West, and of the timothy and clover in the Corn Belt, is fed to beef cattle.

### Cost of Beef Production.

The factors which make up the cost of producing beef cattle may be grouped into four general classes.

The first of these is the initial cost of the cattle on the farm or ranch. If they are purchased elsewhere to be delivered by the purchaser, the cost of such delivery should be added to the purchase price.

The second general group of costs, which may be called "operating expenses," include charges for range or pasture, feed and salt, labor, taxes on cattle, insurance, veterinary costs, death risk, and incidentals. The charge for range or



FIG. 41.—Equipment for producing beef cattle need not be expensive. They do need shelter from cold winds and rains. Barns, cribs, and silos for storing feed should be substantial and so constructed that they give the maximum ventilation consistent with the protection needed.

pasture is the sum of the interest on the value of the land, taxes on the land, and the annual cost of fencing and repairs. When feed is raised it is charged to the cattle at current farm prices. Losses from death should be borne by the animals that live to be marketed. The incidental charges cover office expenses, legal fees, telegrams, and trips to market.

The third group covers the "building and equipment charges," which should take care of the annual depreciation and repairs.

The fourth group includes interest on capital invested in the cattle, buildings, equipment, feed, and funds necessary to meet miscellaneous expenses.

The sum of these four groups of costs, (1) the initial cost of the cattle, (2) the operating expenses, (3) the building and equipment charges, and (4) interest on capital invested, is the gross cost of production.

The value of by-products arising from the cattle business, such as manure, gains of hogs following fattening steers, and milk produced by the breeding herd, should be subtracted from the gross cost to determine the net cost.

Cost figures covering the raising and fattening of cattle, showing the quantities of feed, pasture, and labor necessary in keeping a breeding herd and in producing yearling feeder steers, have been gathered only for cattle in the Corn Belt.

#### Raising Calves and Fattening Baby Beeves.

The figures in Table 6 were gathered on farms covering three different methods of handling the breeding herd and of feeding calves up until they were yearlings, namely, (1) using cows partially milked, the calf taking the rest, (2) beef cows, and (3) baby beef—the calves getting all the milk in Groups 2 and 3. The calves of Groups 1 and 2 were carried as stockers during their first winter, while the calves of Group 3 were fattened as baby beeves on a grain ration and sold for slaughter at about 15 months of age. While the average quantities of grain and man labor used during a year were greatest for the cows partially milked, the milk, cream, and butter received from the partially milked cows normally more than pay for the extra feed and labor put on them. Normally the cost of pasture, winter feed, and labor make up about 83 per cent of the total cost of keeping a partially milked cow, and 80 per cent of the total cost of keeping a cow for the production of feeder steers or calves to be fattened. The feed and labor made up from 85 to 87½ per cent of the total cost of carrying the calves through the winter. The net cost of carrying a calf through the winter added to the cost of the weanling calf in the previous fall gives the total cost of the yearling at 12 to 15 months of age.

TABLE 6.—Quantities of feed and labor required and the computed cost of keeping cows to produce calves and of carrying the weanling calves to short yearlings as stockers or as baby beef (Corn Belt).

| Systems of production.                    | Quantities.            |            |                 | Values. <sup>1</sup>   |            |                 |
|---|------------------------|------------|-----------------|------------------------|------------|-----------------|
|   | Partially milked cows. | Beef cows. | Baby beef cows. | Partially milked cows. | Beef cows. | Baby beef cows. |
| <b>KEEPING A BREEDING COW ONE YEAR.</b>   |                        |            |                 |                        |            |                 |
| Number of cows under study.....           | 1,541                  | 11,261     | 4,572           | -----                  | -----      | -----           |
| Feed:                                     |                        |            |                 |                        |            |                 |
| Pasture.....days..                        | 200                    | 194        | 197             | \$10.00                | \$9.70     | \$9.85          |
| Hay.....pounds..                          | 1,940                  | 1,900      | 1,940           | 9.70                   | 9.50       | 9.70            |
| Silage.....do....                         | 600                    | 700        | 740             | 1.20                   | 1.40       | 1.48            |
| Straw.....do....                          | 580                    | 660        | 500             | .58                    | 1.10       | .50             |
| Corn.....bushels..                        | 4.75                   | 2.2        | 2.5             | 2.58                   | .66        | 1.25            |
| Corn stalks.....acres..                   | 1.75                   | 1.42       | 2.0             | 1.75                   | 1.42       | 2.00            |
| Feed cost.....                            |                        |            |                 | 25.61                  | 23.78      | 24.78           |
| Labor:                                    |                        |            |                 |                        |            |                 |
| Man hours.....                            | 47.2                   | 15.3       | 16.7            | 9.44                   | 3.06       | 3.34            |
| Horse hours.....                          | 9.8                    | 10.4       | 9.6             | .98                    | 1.04       | .96             |
| Other expenses...per cent of gross cost.. | 17                     | 20         | 20              | 7.38                   | 6.97       | 7.27            |
| Gross cost of carrying cow one year.....  |                        |            |                 | 43.41                  | 34.85      | 36.35           |
| Deductions for by-products:               |                        |            |                 |                        |            |                 |
| Manure.....loads..                        | 4.5                    | 4          | 4               | 4.50                   | 4.00       | 4.00            |
| Milk.....gallons..                        | 38                     |            |                 | 3.42                   |            |                 |
| Cream.....do....                          | 11                     |            |                 | 8.25                   |            |                 |
| Butter.....pounds..                       | 16                     |            |                 | 4.00                   |            |                 |
| Skim milk.....do....                      | 1,000                  |            |                 | 2.00                   |            |                 |
| Total deductions.....                     |                        |            |                 | 22.17                  | 4.00       | 4.00            |
| Net cost of carrying cow one year.....    |                        |            |                 | 21.24                  | 30.85      | 32.35           |
| Cows kept per calf raised.....            | 1.143                  | 1.179      | 1.163           |                        |            |                 |
| Cow cost per calf <sup>2</sup> .....      |                        |            |                 | 24.28                  | 36.37      | 37.63           |
| Bull cost per calf.....                   |                        |            |                 | 3.47                   | 2.36       | 2.45            |
| Cost of calf at weaning.....              |                        |            |                 | 27.75                  | 38.73      | 40.07           |

<sup>1</sup> The values given are based on the following prices for feed and labor:

|                   |                    |        |
|-------------------|--------------------|--------|
| Pasture.....      | per head per day.. | \$0.05 |
| Hay.....          | per ton..          | 10.00  |
| Silage.....       | do....             | 4.00   |
| Protein meal..... | do....             | 35.00  |
| Straw.....        | do....             | 2.00   |
| Fodder.....       | do....             | 2.00   |
| Corn.....         | per bushel..       | .50    |
| Cornstalks.....   | per acre..         | 1.00   |
| Man labor.....    | per hour..         | .20    |
| Horse labor.....  | do....             | .10    |

<sup>2</sup> To obtain the cost per calf raised to weaning age of 6 to 8 months, the number of cows kept per calf is multiplied by the cost of keeping a cow one year. To this product, is added the proportionate cost of keeping a bull per calf raised under the various systems.



TABLE 6.—Quantities of feed and labor required and the computed cost of keeping cows to produce calves and of carrying the weaning calves to short yearlings as stockers or as baby beef (Corn Belt)—Continued.

| Systems of production.                                     | Quantities.            |            |                 | Values.                |            |                 |
|--|------------------------|------------|-----------------|------------------------|------------|-----------------|
|  | Partially milked cows. | Beef cows. | Baby beef cows. | Partially milked cows. | Beef cows. | Baby beef cows. |
| <b>WINTERING OR FATTENING A WEANLING CALF:<sup>3</sup></b> |                        |            |                 |                        |            |                 |
| Number of calves under study.....                          | 1,015                  | 7,236      | 4,009           | -----                  | -----      | -----           |
| Feed:  |                        |            |                 |                        |            |                 |
| Hay.....pounds..   | 1,080                  | 1,218      | 1,150           | \$5.40                 | \$6.09     | \$5.75          |
| Silage.....do....  | 218                    | 266        | 658             | .44                    | .53        | 1.32            |
| Protein meal.....do....                                    | 12                     | 7          | 141             | .21                    | .12        | 2.47            |
| Straw.....do....   | 114                    | 110        | 40              | .11                    | .11        | .04             |
| Fodder.....do....  | 204                    | 159        | -----           | .20                    | .16        | -----           |
| Corn.....bushels..   | 6.1                    | 8.6        | 41.0            | 3.05                   | 4.30       | 20.50           |
| Corn stalks.....acres..                                    | .1                     | .1         | .03             | .10                    | .10        | .03             |
| Pasture.....days..   | 10.0                   | 9.0        | 48.0            | .50                    | .45        | 2.40            |
| Feed cost.....   | -----                  | -----      | -----           | 10.01                  | 11.86      | 32.51           |
| Labor:   |                        |            |                 |                        |            |                 |
| Man hours.....   | 12.5                   | 8.6        | 12.2            | 2.50                   | 1.72       | 2.44            |
| Horse hours.....   | 4.7                    | 6.8        | 9.1             | .47                    | .68        | .91             |
| Other expenses...per cent of gross cost..                  | 14                     | 15         | 12.5            | 2.11                   | 2.52       | 5.13            |
| Gross wintering or fattening cost.....                     | -----                  | -----      | -----           | 15.09                  | 16.78      | 40.99           |
| Deductions for by-products:                                |                        |            |                 |                        |            |                 |
| Manure.....loads..   | 1.0                    | 1.5        | 1.5             | 1.00                   | 1.50       | 1.50            |
| Pork.....pounds..  | -----                  | -----      | 38              | -----                  | -----      | 2.85            |
| Total deductions.....                                      | -----                  | -----      | -----           | 1.00                   | 1.50       | 4.35            |
| Net wintering or fattening cost.....                       | -----                  | -----      | -----           | 14.09                  | 15.28      | 36.64           |
| Cost at weaning time.....                                  | -----                  | -----      | -----           | 27.75                  | 38.73      | 40.07           |
| Total production cost, 12 to 15 months.....                | -----                  | -----      | -----           | 41.84                  | 54.01      | 76.71           |

<sup>3</sup> The calves wintered averaged 12 to 14 months of age. The calves fattened as baby beef averaged 14 to 15 months of age and 825 pounds in weight when marketed.

**Beef Cattle Fattening Costs.**

Beginning with the winter feeding season 1918-19, the United States Department of Agriculture and five State experiment stations of the Corn Belt began a five-year study of beef cattle feeding costs. Five general cattle feeding areas, one in each of five Corn Belt States, were selected, namely, eastern Nebraska, west-central Iowa, north-central Illinois, east-central Indiana, and central Missouri. In each of these areas beef cattle feeding cost figures were kept on approximately 100 droves of cattle each year since the first winter, 1918-19.

During the first two winters, when corn was about \$1.50 per bushel, feed made up from 80 to 85 per cent of all feed-lot costs, man and horse labor 4 to 9 per cent, and all other expenses 9 to 14 per cent. During the third winter, 1920-21, when corn was charged to the cattle at about 50 cents a bushel, feed made up from 68 to 76 per cent of all fattening costs, with labor 7 to 11 per cent and the other expenses 17 to 24 per cent.

Table 8 shows that thin cattle going into the feed lot in the fall of 1920 cost very nearly as much as those bought during the previous years of high corn prices. The net cost of 100 pounds gain, however, was about half in 1920-21 what it had been the two preceding years. In the winter of 1918-19 and of 1919-20, when corn was around \$1.50 a bushel, the value of manure and pork paid for all costs other than the feed bill, provided the cattle were not on pasture too long. In the winter of 1920-21, under 50-cent corn prices, manure and pork values paid for only approximately half the feed-lot expenses other than the feed itself. It is a noticeable fact that in the last winter, when feed costs had fallen about half, the other expenses increased in most States.

**Variation in the Cost of Fattening Cattle.**

As there are wide differences between farms in the kind of rations used and methods of feeding, as well as in the grade of feeder cattle bought for feeding and in the skill of the farmer as a cattle feeder, there are wide variations in the net cost of different droves of corn-fed cattle by the time they

TABLE 7.—Quantities of seed and labor used in the Corn Belt in making 100 pounds gain in corn-fed cattle. [Winter feeding seasons; cattle of all ages.]

| Season and State.          | Number of cattle. | Man labor. | Horse labor. | Initial weight. | Total gain. | Com. | Oats. | Barley. | Cottonseed meal. | Linseed oil meal. | Alfalfa molasses feed. | Miscellaneous concentrates. | Total protein feeds. | Clover hay. | Alfalfa hay. | Timothy hay. | Mixed hay. | Wild hay. | Fodder. | Total dry roughage. | Silage. | Pasture days. |    |
|----------------------------|-------------------|------------|--------------|-----------------|-------------|------|-------|---------|------------------|-------------------|------------------------|-----------------------------|----------------------|-------------|--------------|--------------|------------|-----------|---------|---------------------|---------|---------------|----|
| Feeding season of 1918-19: |                   |            |              |                 |             |      |       |         |                  |                   |                        |                             |                      |             |              |              |            |           |         |                     |         |               |    |
| Nebraska.....              | 2,263             | 4.8        | 3.9          | 715             | 295         | 666  | 40    | .....   | .....            | 10                | 4                      | 2                           | 16                   | 49          | 347          | .....        | 402        | 53        | 4       | 272                 | 787     | 137           | 13 |
| Iowa.....                  | 3,986             | 3.3        | 2.8          | 745             | 272         | 810  | 18    | 20      | 15               | 18                | 38                     | 7                           | 78                   | 86          | 73           | 9            | 23         | 3         | 121     | 160                 | 485     | 471           | 11 |
| Illinois.....              | 2,098             | 6.9        | 4.0          | 789             | 295         | 462  | 18    | 43      | 42               | 35                | 4                      | .....                       | 81                   | 91          | 18           | 5            | 173        | .....     | 6       | 839                 | 1,132   | 1,756         | 11 |
| Indiana.....               | 1,540             | 4.6        | 1.2          | 680             | 344         | 391  | 14    | 1       | 79               | 1                 | 47                     | 19                          | 146                  | 33          | 6            | .....        | 93         | .....     | 30      | 209                 | 461     | 1,516         | 9  |
| Missouri.....              | 3,473             | 3.9        | 5.3          | 729             | 288         | 267  | 18    | .....   | 83               | 26                | 47                     | 22                          | 178                  | 10          | 58           | 1            | 41         | .....     | 72      | 139                 | 321     | 908           | 50 |
| Feeding season of 1919-20: |                   |            |              |                 |             |      |       |         |                  |                   |                        |                             |                      |             |              |              |            |           |         |                     |         |               |    |
| Nebraska.....              | 3,857             | 2.9        | 2.1          | 797             | 270         | 754  | 19    | .....   | .....            | 4                 | 1                      | .....                       | 5                    | 81          | 375          | 2            | 33         | 13        | 3       | 230                 | 737     | 98            | 18 |
| Iowa.....                  | 4,294             | 2.6        | 2.2          | 788             | 326         | 808  | 11    | .....   | .....            | 4                 | 15                     | .....                       | 10                   | 43          | 146          | 3            | 80         | 7         | 34      | 86                  | 399     | 373           | 17 |
| Illinois.....              | 4,607             | 5.7        | 3.1          | 821             | 247         | 573  | 2     | 1       | 36               | 23                | 15                     | .....                       | 74                   | 168         | 18           | 15           | 110        | .....     | 49      | 859                 | 1,219   | 2,426         | 10 |
| Indiana.....               | 3,016             | 4.8        | 1.5          | 784             | 290         | 552  | 7     | 1       | 41               | 2                 | 9                      | 11                          | 63                   | 60          | 5            | 9            | 35         | .....     | 128     | 346                 | 583     | 1,471         | 14 |
| Missouri.....              | 5,184             | 3.5        | 3.6          | 807             | 257         | 524  | 8     | .....   | 15               | 30                | 14                     | 2                           | 61                   | 87          | 64           | 6            | 21         | .....     | 98      | 123                 | 399     | 763           | 44 |
| Feeding season of 1920-21: |                   |            |              |                 |             |      |       |         |                  |                   |                        |                             |                      |             |              |              |            |           |         |                     |         |               |    |
| Nebraska.....              | 2,827             | 3.0        | 2.1          | 873             | 300         | 856  | 9     | 1       | .....            | 3                 | .....                  | .....                       | 3                    | 51          | 344          | .....        | 43         | 37        | 2       | 222                 | 690     | 38            | 11 |
| Iowa.....                  | 5,534             | 2.3        | 1.5          | 841             | 353         | 891  | 18    | 1       | 2                | 3                 | 9                      | .....                       | 14                   | 74          | 138          | 5            | 26         | .....     | 15      | 117                 | 375     | 70            | 19 |
| Illinois.....              | 3,632             | 4.8        | 2.9          | 843             | 258         | 590  | 5     | 1       | 34               | 17                | 4                      | .....                       | 55                   | 65          | 17           | 7            | 117        | .....     | 139     | 633                 | 998     | 1,771         | 11 |
| Indiana.....               | 2,899             | 5.0        | 2.1          | 829             | 270         | 671  | 12    | .....   | 40               | 1                 | .....                  | 1                           | 42                   | 63          | 5            | .....        | 34         | .....     | 241     | 322                 | 665     | 1,266         | 14 |
| Missouri.....              | 5,199             | 3.1        | 3.2          | 843             | 342         | 707  | 2     | .....   | 31               | 4                 | 3                      | 10                          | 48                   | 124         | 21           | 1            | 25         | .....     | 104     | 53                  | 328     | 513           | 38 |

**Shelled basis,**

reach the stockyards. This difference was greatest during the winters of 1918-19 and 1919-20, when the farm price of corn was about \$1.50 a bushel and the prices of other feeds correspondingly high, as Figure 42 shows.

In the 1920-21 winter, when corn fed to the cattle covered in this study averaged 52 cents a bushel, there were not such wide differences in costs from one drove to another. The average cost per 100 pounds live weight of finished cattle covered in this study in the winter of 1918-19 was \$14.69; in 1919-20 was \$14.04; and in 1920-21 was \$10.19.

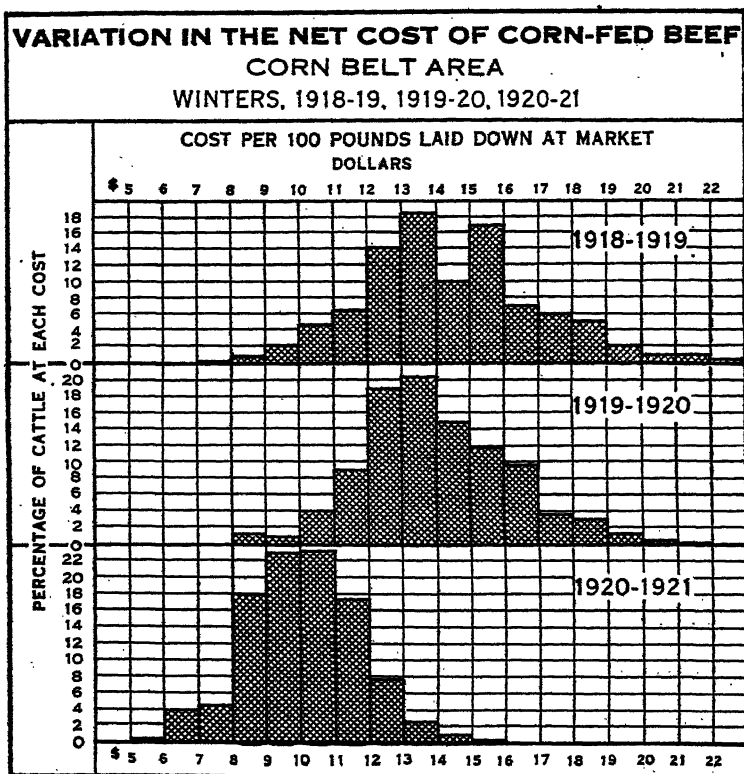


FIG. 42.—There is great variation in the cost per hundred pounds of producing fat cattle on different farms and in different years, especially since the war, when prices of feed and labor have been changing rapidly. In the winter of 1918-19 the cost varied from \$7 to \$23, but 57 per cent cost between \$12 and \$16 per hundred pounds. In 1919-20 the variation was from \$8 to \$22, but 65 per cent cost between \$12 and \$16. In 1920-21 the cost varied from \$5 to \$16, and 81 per cent cost between \$8 and \$12. The cost of production survey included about 55,000 cattle.

TABLE 8.—Costs of fattening cattle in the Corn Belt.

[Average of cattle of all ages.]

| Season and State.         | Days on farm. | Average gain (pounds). | Daily gain (pounds). | Net cost of 100 pounds gain. | Initial cost. | Feed.   | Labor. | Other expenses. | Gross cost at market. | Manure and pork. | Net cost at market. | Sales weight (pounds). |
|---------------------------|---------------|------------------------|----------------------|------------------------------|---------------|---------|--------|-----------------|-----------------------|------------------|---------------------|------------------------|
| <b>Winter of 1918-19:</b> |               |                        |                      |                              |               |         |        |                 |                       |                  |                     |                        |
| Nebraska.....             | 176           | 285                    | 1.68                 | \$26.48                      | \$70.40       | \$79.69 | \$7.01 | \$9.24          | \$166.34              | \$17.83          | \$148.51            | 1,010                  |
| Iowa.....                 | 155           | 272                    | 1.75                 | 29.10                        | 75.28         | 83.19   | 4.62   | 9.25            | 172.34                | 17.92            | 154.42              | 1,017                  |
| Illinois.....             | 186           | 295                    | 1.59                 | 28.28                        | 81.68         | 84.57   | 9.19   | 11.97           | 187.41                | 22.31            | 165.10              | 1,084                  |
| Indiana.....              | 183           | 344                    | 1.88                 | 22.40                        | 76.29         | 75.52   | 5.94   | 12.80           | 170.55                | 17.21            | 153.34              | 1,024                  |
| Missouri.....             | 161           | 268                    | 1.66                 | 23.59                        | 71.38         | 56.91   | 4.89   | 8.45            | 141.63                | 7.02             | 134.61              | 997                    |
| <b>Winter of 1919-20:</b> |               |                        |                      |                              |               |         |        |                 |                       |                  |                     |                        |
| Nebraska.....             | 156           | 270                    | 1.73                 | 23.99                        | 80.49         | 66.84   | 3.80   | 8.97            | 160.10                | 14.84            | 145.26              | 1,087                  |
| Iowa.....                 | 184           | 326                    | 1.80                 | 23.28                        | 77.10         | 82.30   | 4.13   | 10.72           | 174.25                | 21.27            | 152.98              | 1,112                  |
| Illinois.....             | 170           | 247                    | 1.45                 | 33.22                        | 77.52         | 84.10   | 6.68   | 10.44           | 178.74                | 19.16            | 159.58              | 1,068                  |
| Indiana.....              | 183           | 290                    | 1.58                 | 25.26                        | 79.94         | 76.09   | 5.99   | 12.37           | 174.39                | 21.20            | 153.19              | 1,074                  |
| Missouri.....             | 196           | 262                    | 1.34                 | 26.22                        | 77.26         | 65.71   | 4.67   | 8.51            | 156.15                | 10.20            | 145.95              | 1,069                  |
| <b>Winter of 1920-21:</b> |               |                        |                      |                              |               |         |        |                 |                       |                  |                     |                        |
| Nebraska.....             | 166           | 309                    | 1.86                 | 13.94                        | 78.68         | 34.17   | 4.29   | 12.05           | 129.19                | 7.44             | 121.75              | 1,182                  |
| Iowa.....                 | 194           | 353                    | 1.83                 | 12.34                        | 74.67         | 36.89   | 3.81   | 11.99           | 127.36                | 9.14             | 118.22              | 1,194                  |
| Illinois.....             | 174           | 258                    | 1.48                 | 18.08                        | 66.49         | 38.17   | 5.78   | 10.63           | 121.02                | 7.89             | 113.13              | 1,101                  |
| Indiana.....              | 166           | 270                    | 1.63                 | 15.44                        | 70.09         | 35.30   | 5.22   | 11.25           | 121.86                | 10.08            | 111.78              | 1,099                  |
| Missouri.....             | 252           | 343                    | 1.40                 | 16.11                        | 67.81         | 48.06   | 4.64   | 10.53           | 131.04                | 7.97             | 123.07              | 1,186                  |

\* The details of the feed-lot costs are given in Appendix. Page 836, Table 486.

TABLE 9.—The normal costs of fattening a 2-year-old steer in the Corn Belt, with the farm price of corn at given levels.

| Farm price of corn. | Feed.              | Man labor.       | Expenses other than feed and labor. | Gross fattening cost. | Expenses for pork and manure. | Net cost. | Average gain (pounds). |
|---------------------|--------------------|------------------|-------------------------------------|-----------------------|-------------------------------|-----------|------------------------|
| \$0.50.....         | \$36.05<br>(74.0%) | \$2.22<br>(4.6%) | \$10.46<br>(21.4%)                  | \$48.73<br>(100%)     | \$8.68                        | \$40.05   | 315                    |
| \$0.75.....         | \$47.45<br>(77.0%) | \$2.91<br>(4.7%) | \$11.26<br>(18.3%)                  | \$61.62<br>(100%)     | 11.23                         | 50.39     | 305                    |
| \$1.00.....         | \$58.85<br>(79.0%) | \$3.60<br>(4.9%) | \$12.05<br>(16.2%)                  | \$74.50<br>(100%)     | 13.78                         | 60.72     | 295                    |
| \$1.25.....         | \$70.25<br>(80.4%) | \$4.28<br>(4.9%) | \$12.85<br>(14.7%)                  | \$87.38<br>(100%)     | 16.35                         | 71.03     | 285                    |
| \$1.50.....         | \$81.65<br>(81.4%) | \$4.97<br>(5.0%) | \$13.66<br>(13.6%)                  | \$100.28<br>(100%)    | 18.91                         | 81.37     | 275                    |

**Costs at Different Corn-Price Levels.**

Table 9 shows the normal cost of fattening a steer in the Corn Belt when the farm price per bushel of corn is at any one of the five prices given. Due consideration was taken of the fact that the freight and labor costs during the winter of 1920-21 were not in line with 50-cent corn, and adjustments were made to pre-war freight and wages.

Feed represents a somewhat higher per cent of the gross cost with high-priced corn than it does with the 50-cent corn. The value of pork and manure produced behind cattle amounts to as much as all expenses other than feed with \$1.50 corn, while with 50-cent corn the value of pork and manure amounts in normal times to about two-thirds of the expenses other than feed. It will be noted that this table bears out the rule that starting with 50-cent corn the net cost of fattening a steer advances half as fast as the price of corn; that is, when the price of corn doubles from 50 cents to \$1 a bushel, the net cost of fattening a steer increases one-half over what it cost at the 50-cent corn level.

**Price Returned for Corn by Winter-Fed Cattle.**

Cattle charged with the cash farm prices for corn and other feeds were not always able to return a profit to their owners. There were many cattle, especially in the winters of 1918-19 and 1919-20, that were able, however, to return market prices for all their feed other than corn and, in addition, returned enough to pay the cost of growing this corn. When taking the average per head sales price of each drove of cattle covered in this study, and subtracting from this amount of money all the costs going into making that steer, excepting the cost of corn, the balance of money left has been called the returns that the steer made for corn. Not all cattle under study fed during the three winters showed a profit balance even when corn was not charged to them. In making Figure 43, the money that some steers showed as a loss balance divided by the bushels of corn eaten gives as a result a figure which has been called the loss per bushel of corn eaten.

It is noticeable that in the winter of 1920-21 very few cattle were able to return more than \$1 per bushel for corn fed,

**PERCENTAGE OF CATTLE  
RETURNING CERTAIN VALUE PER BUSHEL OF CORN FED  
OTHER FEEDS HAVING BEEN CHARGED AT CASH FARM PRICES  
CORN BELT AREA**

WINTERS 1918-19, 1919-20, 1920-21

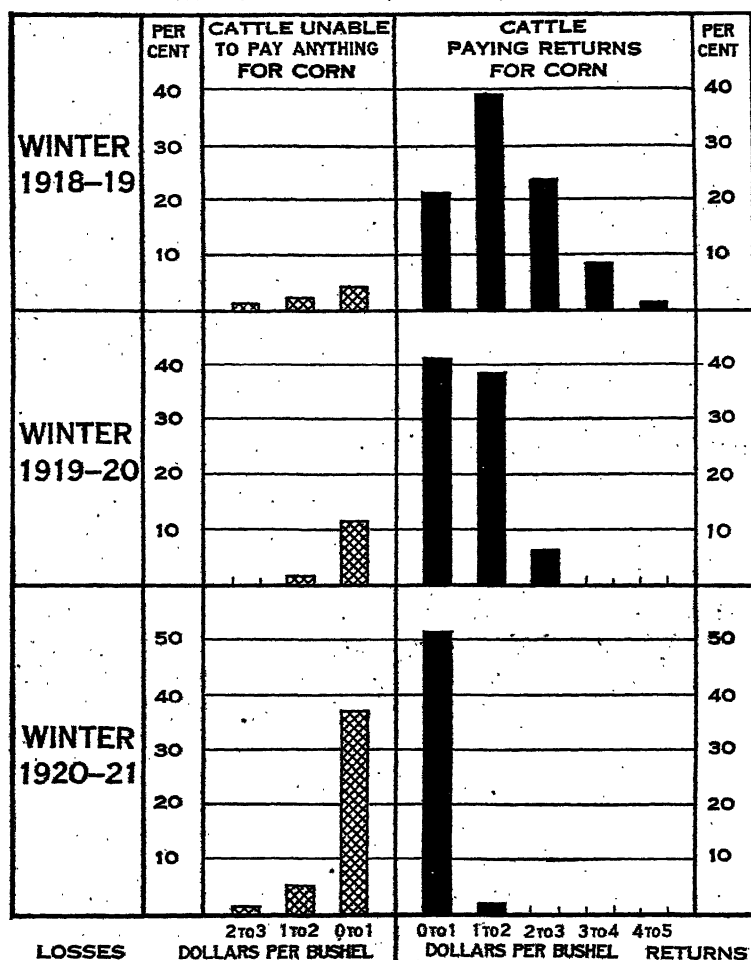


FIG. 43.—There is a considerable number of steers which do not pay for the corn fed to them, when other feeds are charged at cash farm prices. The cross-hatched columns represent the percentage of the steers each winter which lost from 1 cent to \$2 per bushel of corn they were fed, while the black columns represent the steers paying from 1 cent to \$5 for the corn. In the winter of 1920-21 almost one-half the steers paid nothing for the corn fed to them, if other feeds are charged at cash farm prices. (See Fig. 42.)

while on the other hand many cattle were unable to return anything to their owners for their corn after paying market prices for all other feed (see Fig. 43).

Averaging together the cattle under study in all five Corn Belt States, the amount realized per bushel of corn fed to them, after they had paid all other feed-lot expenses, was \$1.29 in the winter of 1918-19. \$0.80 in the winter of 1919-20, and \$0.01 in the winter of 1920-21.

### Importance of Credit for Beef Production.

The financial needs of beef-cattle producers can be separated roughly into two classes. First, cattlemen who breed and raise cattle, either to fatten or to sell as stockers and feeders, need loans maturing in not less than one to three years. This is called "middle term" credit. Secondly, men who purchase and fatten feeder cattle need "short term" credit for three to six months.

At present the chief agencies for credit are the local banks and cattle-loan companies. Banking laws frequently limit the size and duration of loans to such an extent that the banks can not satisfactorily meet the credit demands of cattlemen. Cattle-loan companies are found in practically all important live-stock markets. Ordinarily it is very difficult to obtain satisfactory loans on cattle for one to three years, as these agencies desire to make loans for a period not to exceed six months, which, of course, is ample for feeding purposes. When one needs credit for a longer period for developing young cattle for market the privilege of renewal is frequently granted. In some cases the loans are made without any security other than a promissory note from the borrower, but more commonly the borrower is required to give a mortgage on his live stock or land.

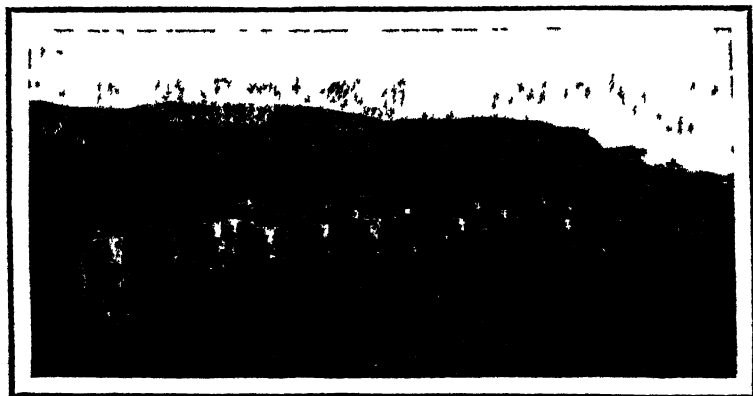
The use of credit or financial statements has become quite common in connection with cattle loans. As a rule an examiner inspects the herd occasionally to see that the value of the security pledged for the loan is protected. When the borrower is a reliable man and a good feeder, and the market is steady, the banks may grant credit up to 100 per cent of the value of the herd, because live stock usually becomes much more valuable with time due to growth and finish. The aver-



age, however, is nearer 75 per cent. Some loans are made for only 50 per cent of the market value.

In order to be eligible for rediscount at Federal reserve banks cattle paper must have a maturity not to exceed six months and must be presented by a member bank. The proceeds of these notes must also have been used for agricultural purposes. Cattle-loan companies, however, usually desire to find a buyer for their notes and mortgages. If they are for small amounts they are usually sold as such direct to investors. Companies who make large loans, however, find it easier to dispose of these notes by retaining them as security for notes or bonds issued by the company in popular denominations.

The activities of the Stock Growers' Finance Corporation and the War Finance Corporation during the summer and fall of 1921 and the winter of 1922 have helped to establish easier and longer credit for cattlemen. Their needs could be met much more adequately by slight amendments to the Federal Reserve and Federal Farm Loan acts.



### Marketing Beef Cattle.

The market is the goal of the producer. The cattleman therefore is greatly concerned in knowing what the consumer wants in the way of beef or veal, when it is wanted, where it must be delivered, and what price it will probably command.

Cattle marketing has undergone many important changes since the country was first founded. In the early colonial days the family circle comprised both producer and consumer, and consequently there were neither marketing nor marketing problems. Specialization in production soon resulted in surpluses which had to be disposed of outside the family circle. Then marketing began with all its attending difficulties and problems.

Boston was probably the first centralized live-stock market in the country, records indicating that as early as 1638 cattle were driven from New Hampshire to Boston to be marketed.

The Dutch, at New Amsterdam, which is now New York City, the Quakers at Philadelphia, and the English Catholics at Baltimore each established cattle markets at an early date. It is noteworthy that all of these early markets have functioned continuously down to the present time, despite the westward movement of the beef-cattle industry.

With the development of the Corn Belt and the opening of the Western Range regions live-stock markets were established at various points on the Great Lakes and along the Mississippi and Missouri Rivers. Thereafter most of the western cattle went to these newer and nearer markets instead of to the Atlantic seaboard. Beef was packed in Chicago as early as 1832, but the first stockyards were not established until 1848. In 1865 the Chicago Union Stock Yards were opened, five smaller stockyards located in different parts of the city having been combined to form the new organization.

During the last half of the nineteenth century markets were opened at Kansas City, St. Louis, Louisville, Omaha, Denver, Sioux City, St. Paul, St. Joseph, and Wichita. During the next 10 years Fort Worth, Oklahoma City, and Portland, Oreg., markets were established, while more recently the list has been increased by the opening of markets at Salt Lake City, Seattle, Nebraska City, Sioux Falls,

Atlanta, Dallas, Montgomery, El Paso, Jacksonville, and elsewhere, until at the present time there are some 67 well-established, centralized live-stock markets doing business.

The volume of business passing through these central markets annually is enormous. Complete receipts data are available only as far back as 1915, when the United States Department of Agriculture began compiling such information. During the seven years 1915 to 1921, inclusive, a total of 147,787,991 cattle and calves passed through public stockyards. In 1918 total receipts of cattle and calves at central markets amounted to 25,295,000 head, which is probably the greatest number to be so marketed during a single year in the history of the country.

#### Modern Methods of Marketing Beef Cattle.

Many methods are used by the producer in marketing beef cattle, but most of them may be grouped under six or seven general heads. The principal systems, listed in the probable order of their relative importance, are as follows:

(a) Selling to country drover for shipment to central markets.

(b) Shipping to central markets through cooperative associations.

(c) Shipping to central markets direct.

(d) Direct marketing to local butchers.

(e) Selling direct: (1) Selling direct to packer-buyer, or speculator in the country. (2) Shipping direct to the packing house.

(f) Slaughtering on farms and selling as carcass meat.

(g) Special forms of marketing, such as (1) auction sales, (2) selling on the range to cooperative purchasers, etc., (3) selling on mail orders.

From one-half to three-fourths of the beef cattle marketed in the United States pass through central markets. In 1916 central markets received more than 71 per cent of the beef cattle marketed, and in 1917, 76 per cent. Since then there has been a slow but steady decrease in the percentage of cattle disposed of through public stockyards. In 1918 about 75 per cent, in 1919, 74 per cent, and in 1920, 70 per cent passed through public stockyards, whereas in 1921 the apparent proportion so marketed dropped to 67 per cent.

One of the earliest methods of disposing of cattle was through sales to the country drover, and although during the past few years the business of the drover has been seriously curtailed because of the development of newer methods of marketing, it seems probable that a greater per cent of cattle and calves still pass through the hands of the country drover than are marketed in any other way. Formerly the drover had a tremendous advantage in his dealings with most farmers due to his superior knowledge of general market conditions. Recently, however, the extension of such facilities as the telephone, rural free delivery of mail, wireless telegraph and telephone has placed the farmer on a more nearly equal footing with the drover.

Next to the country drover, cooperative shipping is probably the most important present-day method of marketing beef cattle. In 1920 approximately one-fourth of Iowa's live stock was marketed cooperatively. During the same year Wisconsin had about 500 cooperative live-stock shipping associations, which handled approximately 65 per cent of the live stock marketed by that State.

Shipping to central markets by producers has always been the favorite method of large-scale producers. The range cattleman or the Corn Belt feeder who has anywhere from a few carloads to several trainloads of cattle to market at one time usually prefers to take his own stock to market rather than patronize either the country drover or the cooperative shipping association.

The local butcher has always provided an important outlet for cattle. His nearness to the producer gives him certain advantages, but during recent years this advantage has been somewhat neutralized by the economy of large-scale slaughtering and the extension by the big packers of the peddler car system.

Selling direct to a speculator or packer buyer in the country and shipping direct to the packing house appeals to some producers on account of the elimination of stockyard charges. The chief objection to these methods is that it relieves the producer of a certain amount of responsibility and thereby contributes to his position of comparative isolation and discourages careful study of market and trade conditions.

In 1919, 1,904,581 cattle and calves were slaughtered on farms, while 224,780,189 pounds of beef and veal were sold from farms during the same year. Auction sales, selling on mail order, and selling on the range to cooperative purchasers, are comparatively new ways of disposing of cattle and have not, as yet, become important.

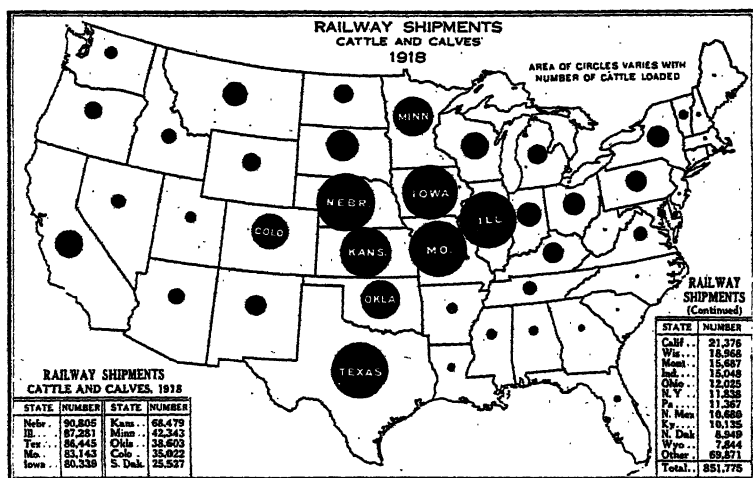


FIG. 44.—Statistics of railway loadings of cattle and calves are available only for the year 1918. Nebraska was the leading State in that year, with over 90,000 carloads. Illinois, Texas, Missouri, and Iowa each shipped nearly as many, Iowa shipping practically as many from country markets as Nebraska. These five States furnished more than half of all cattle and calves shipped in the United States during that year. Market as well as country loadings are included. The cattle were shipped mostly to the big markets and packing centers located in the same group of States. (See Figs. 45, 53, and 54.)

#### Cattle Markets.

The flow of cattle and calves through central markets is made up of many smaller streams, every State contributing its quota. These contributions vary greatly in size. A survey for the year 1918 (Fig. 44) indicated that during that year Nebraska was first, with 90,805 carloads; Illinois second, with 87,281; Texas third, with 86,445; Missouri fourth, with 83,143; and Iowa fifth, with 80,339. These five States loaded and shipped more than 50 per cent of the cattle and calves loaded in the entire country that year. A very large per cent of these cattle eventually reach one or another of the half dozen leading markets situated in the Corn Belt.

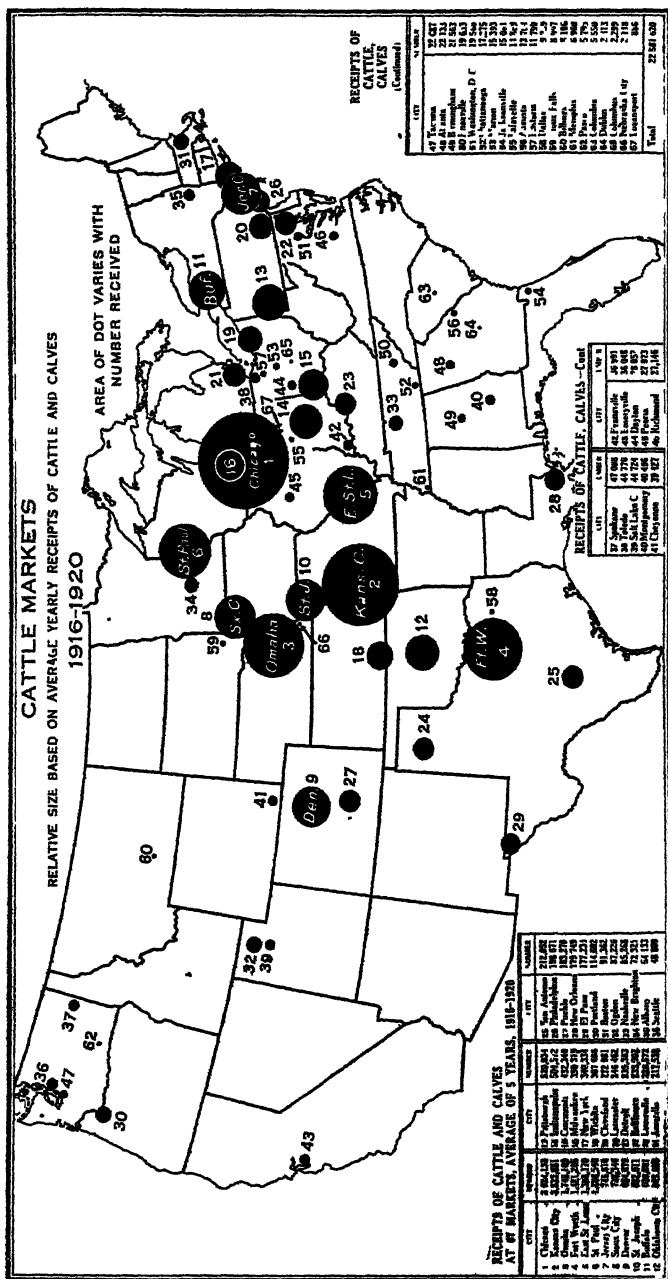
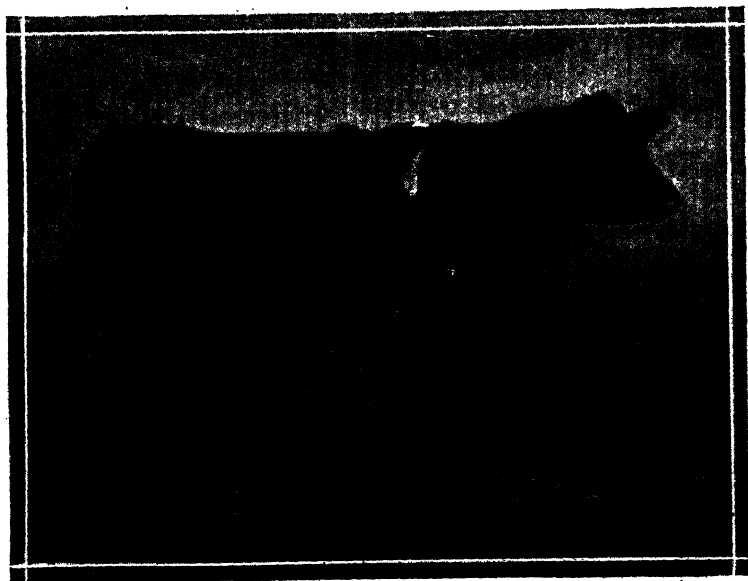
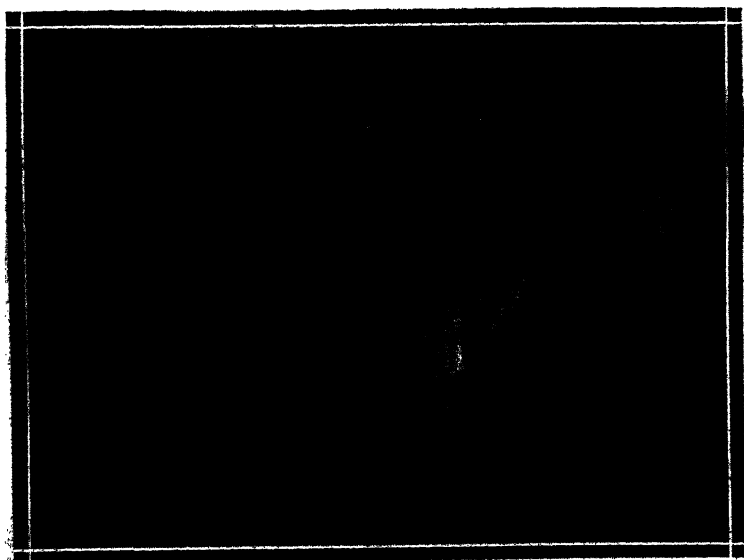


FIG. 45.—Over 56 per cent of the receipts of cattle and calves at the 67 public stockyards in the United States during the years 1916 to 1920 were at points in the Corn Belt. Other important yards are located at Fort Worth, St. Paul, Jersey City, Denver, Buffalo, Oklahoma City, Pittsburgh, and Indianapolis. The annual receipts at Chicago have been greater than any other market since the founding of the present yards in 1865. Kansas City ranks second and Omaha third. Most of the cattle received at these yards are sold to packers for slaughter, but large numbers are also sold to farmers for stockers and feeders. (See Figs. 47, 53, and 54.)

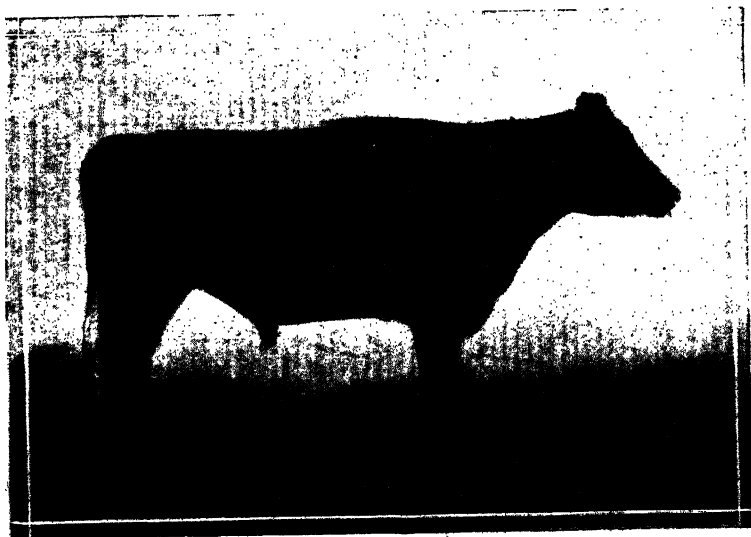


Choice Feeder Steer.



Good Feeder Steer.

FIG. 16.—Feeder cattle are those which give evidence of ability to put on additional flesh and fat. The grade of such animals is determined by the relative ability to do this quickly, economically, and on those parts which comprise the more desirable and therefore higher priced cuts of meat. Four grades of feeder steers—choice, good, medium, and common—are illus-



Medium Feeder Steer.



Common Feeder Steer.

trated. Note the differences in conformation and finish. The choice feeder has a straight, broad back, good depth of barrel, loin, and flank, a full round, short neck and legs, and a broad muzzle. The lower grades are more or less deficient in one or more of these important characteristics. Compare with Figure 66.



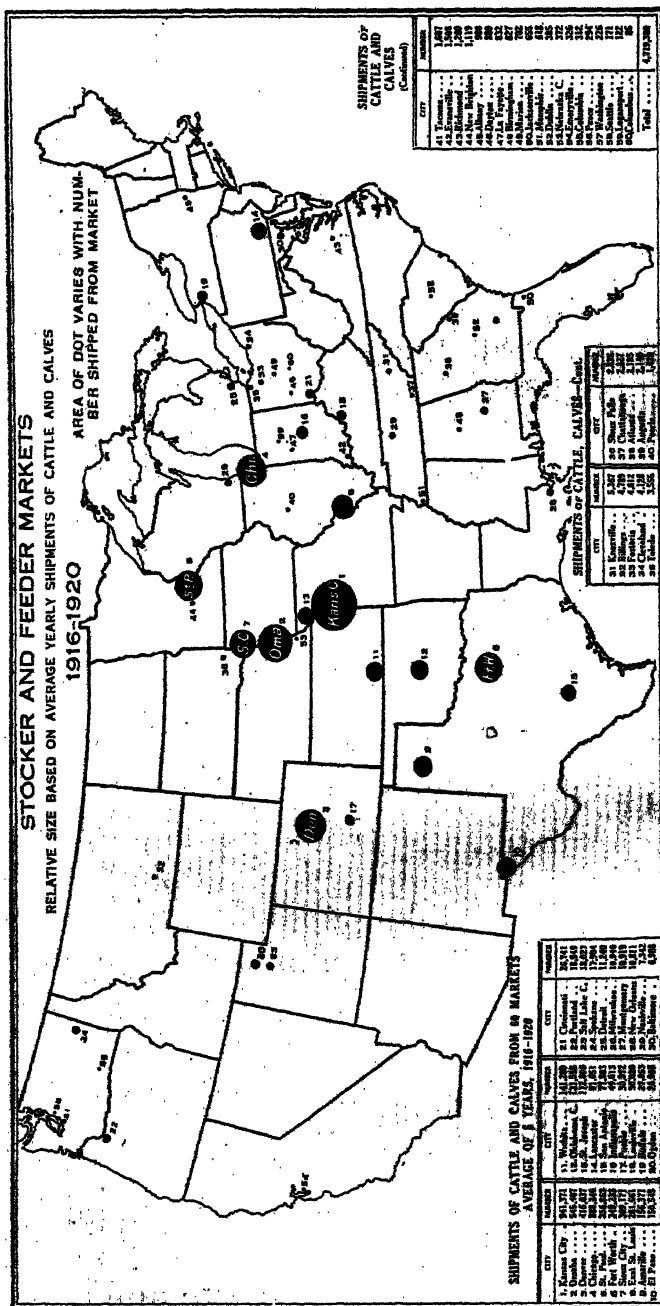


FIG. 47. Kansas City leads all markets in the country in number of stocker and feeder cattle and calves handled. Omaha ranks second. Denver third and Chicago fourth. St. Paul, Sioux City, and Fort Worth are other important markets. Most of these large stocker and feeder markets lie along the margin between the grazing lands of the West where the stockers and feeders are produced, and the Corn Belt and other feeding areas to the east. The four large Missouri River markets (Kansas City, St. Joseph, Omaha, and Sioux City) handle over 40 per cent of the number shipped from the 67 public markets. The dots on this map correspond in size with those of Figure 45.

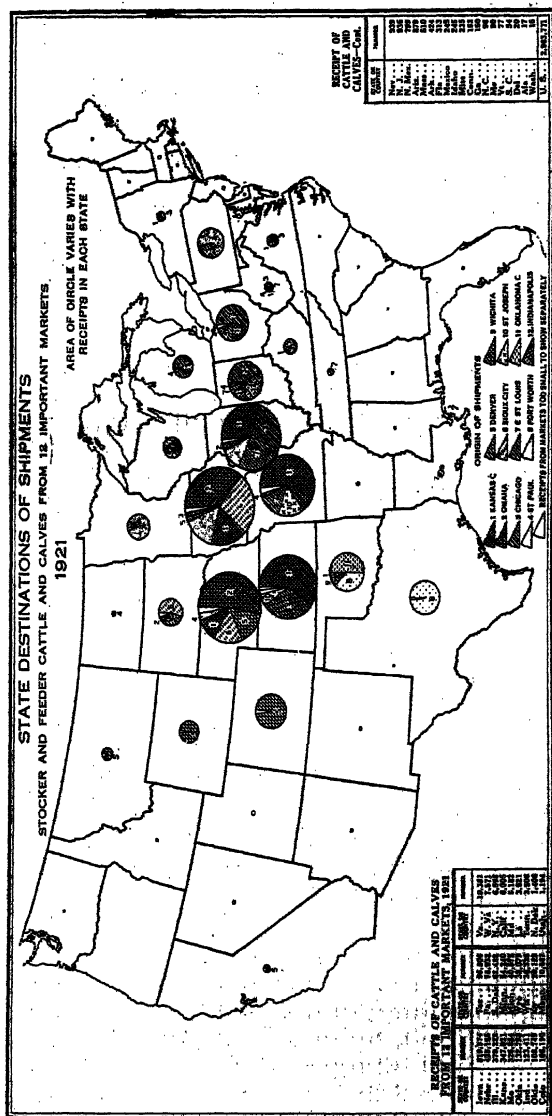


Fig. 48.—Long-horned during 1981 more stocker and feeder cattle and calves from the 12 important markets than any other State. Nebraska ranked second in number received, Illinois third, Kansas fourth, and Missouri fifth. These five Corn Belt States received over two-thirds of the shipments of stockers and feeders from these 12 markets. It is noteworthy that stockers and feeders were shipped from Denver as far west as California. (Compare with Fig. 47 opposite.)

Rating the central markets on the basis of their average annual receipts of cattle and calves during the five years 1916 to 1920 (Fig. 45), Chicago leads, with Kansas City second, and Omaha third. It is interesting to note that despite the establishment of important live-stock markets near the center of the Corn Belt and considerably nearer the great cattle-producing areas of the West, Chicago has been able to hold first place in receipts every year since 1865.

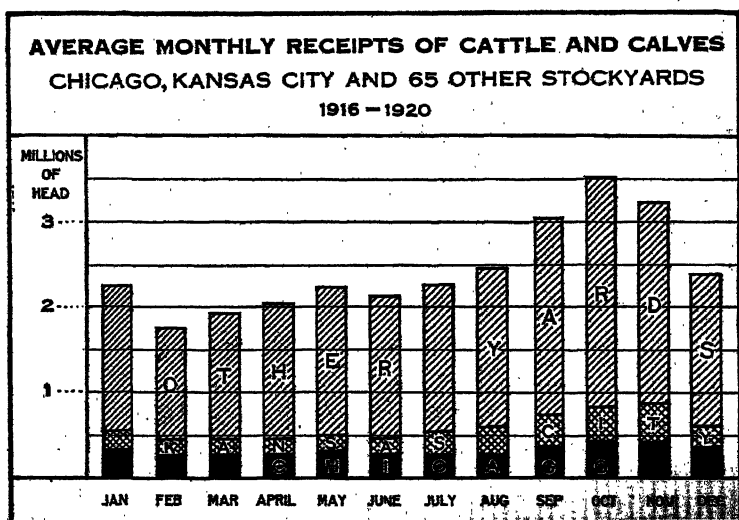


FIG. 49.—Seasonal conditions regulate the movement of cattle to market. The heavy movement from the West begins in July or August, reaches its crest in October, after the grazing season is over, and ends in December. The movement from the Corn Belt, although continuing throughout the year, does not assume large proportions until spring, reaching its crest in May. A considerable number of cattle are received in the spring also from the Southwestern States. (For location of the markets see Fig. 45.)

Not all cattle marketed are converted immediately into beef. About 20 per cent of all cattle and calves received at the 67 markets during the five years 1916 to 1920, inclusive, were returned to the country for further feeding. As shown in Figure 47, Kansas City ranked first as a stocker and feeder market, with an average annual movement of approximately 942,000 head. Omaha was second with 545,000, and Denver third with 415,000. Chicago, which in all previous classifications had occupied first place, dropped to fourth with

respect to stockers and feeders handled, with average annual shipments of 388,000 head.

During 1921, 12 markets handled 84.6 per cent of all stockers and feeders passing through public stockyards (see Fig. 47). During the preceding year the same markets handled 82 per cent. The State destinations of stockers and feeders passing through these markets provides a basis for determining the sections in which most of the cattle finishing is done. In 1921 Iowa received from the 12 markets referred to, a total of 519,374 stocker and feeder cattle and calves, and

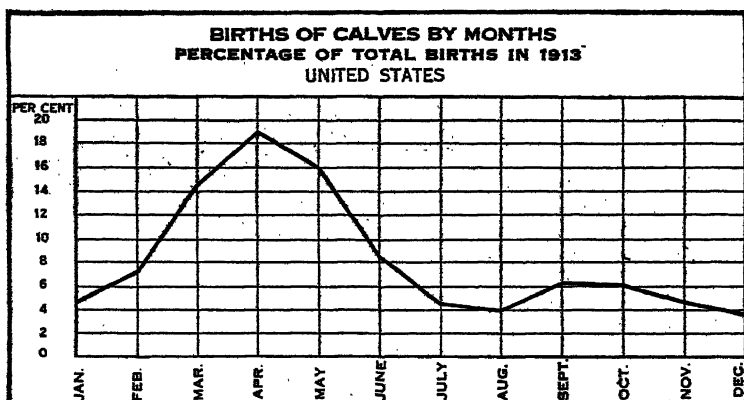


FIG. 50.—Half of the calves are born in the three spring months, the peak being reached in April. A small increase in number of births occurs again in the fall, during which months about 17 per cent are born. The slaughter of calves shows a similar curve, but the crests occur a month later. (See Fig. 51.)

led all States in that regard. Nebraska was second with 433,125, Illinois third, Kansas fourth, and Missouri fifth. These are all Corn Belt States. (Fig. 48.)

#### Seasonal Movements of Cattle.

An important characteristic of the movement of cattle through public stockyards is the seasonal variations. Both range and pasture cattle are marketed when the pasture season ends, while the bulk of the cattle from the Corn Belt go to market from three to four months after they are put on feed. Since probably 75 per cent of the cattle marketed are grass cattle it is obvious that their movement represents the peak for the year.

A tabulation of cattle and calf receipts at all public markets for five years (Fig. 49) shows that October is, on the average, the month of heaviest marketing, November second, and September usually third. As a rule February is the lightest month, partly due to the fact that it is the shortest month but more particularly because it comes between seasons. By that time the grass-fed cattle have all been marketed and only a few of the grain-fed cattle are ready for market. For the five years studied the October

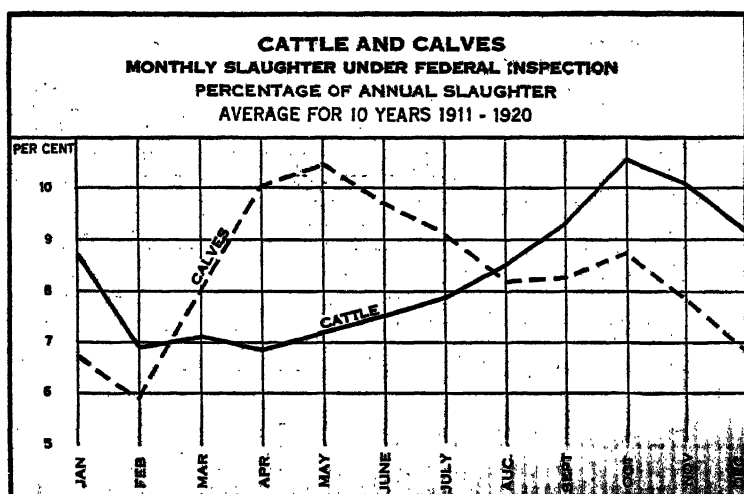


FIG. 51.—The heaviest calf slaughter is in late spring, a few weeks after birth, while the heaviest slaughter of cattle is in the fall, at the end of the summer grazing season, grass being the cheapest feed for making beef. The scale of the graph is not carried down to zero, so that the seasonal slaughter is really more uniform than it appears on the graph. Compare the calves curve with Figure 50, and the cattle curve with Figure 52.

average was 2,709,148 head, while that of February was 1,357,549, a variation of nearly 50 per cent. Normally over 40 per cent of the total number marketed during the year go to market during the last four months.

These seasonal surpluses usually react to the decided disadvantage of the producer in the form of dull trade and lower prices. For many years individuals and organizations have made serious efforts to devise ways of equalizing receipts at public markets. For one reason or another most of these have failed, the chief difficulty arising from the fact,

pointed out above, that such movements are controlled largely by weather and climatic conditions.

This same troublesome fact of unevenness in the movement of cattle and calves to market is shown by slaughter records (Fig. 51). Considering monthly average slaughter of cattle under Federal inspection for 10 years, October

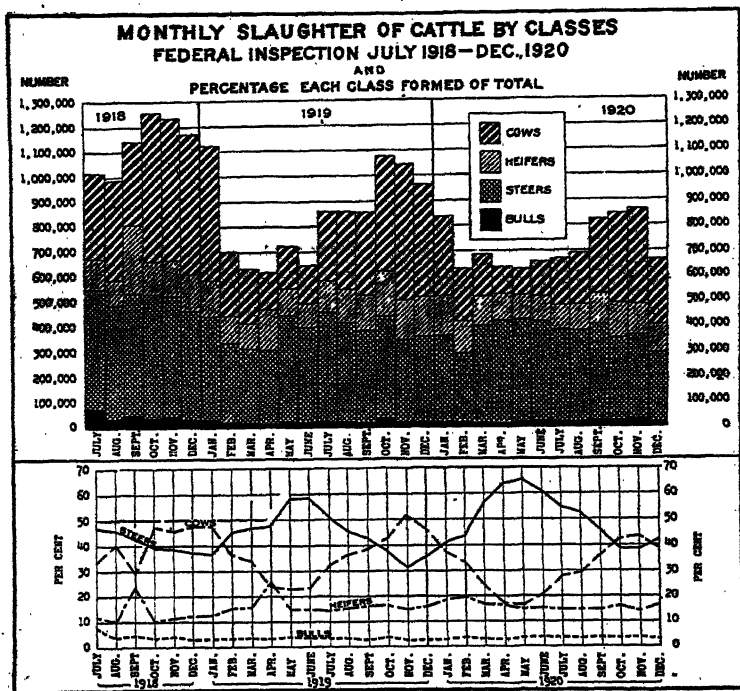


FIG. 52.—Much of the variation in monthly receipts of cattle at public markets is due to unevenness in the movement of cows to market at different seasons of the year. During this period of 30 months in which statistics were collected the number of cows slaughtered varied from about 20 per cent in the spring to nearly half of all cattle slaughtered during the late fall and early winter. The receipts of steers are relatively uniform throughout the year.

again stands out as the month of heaviest movement. During that month 11 per cent of the total slaughter for the year occurred. November was the next heaviest month and September third.

While this was true of cattle, calf slaughter followed a quite different course. As most calves are dropped in the

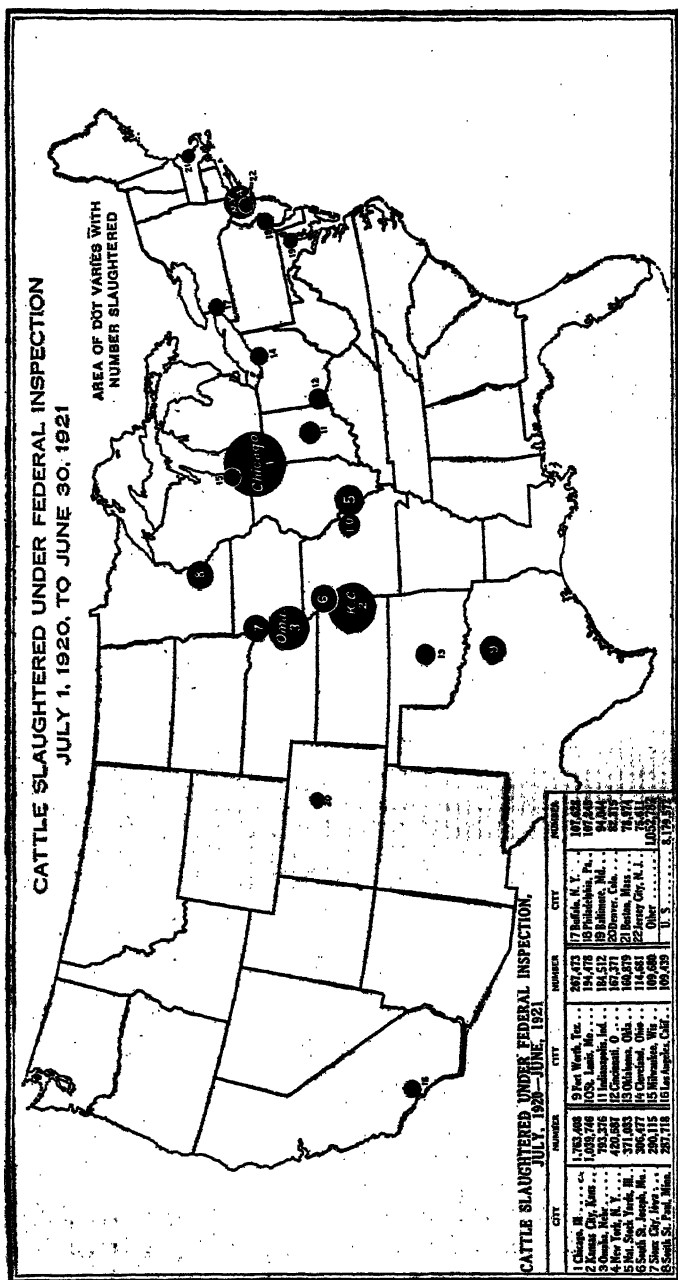


FIG. 53.—Two-thirds of the cattle slaughtered under Federal inspection are slaughtered in the Corn Belt—nearly half in Chicago, Kansas City, Omaha, St. Louis, and East St. Louis. (See Fig. 78.) The cattle slaughtered under Federal inspection constitute about two-thirds of the total annual slaughter in the United States, consequently one-third of the total slaughter is at these four points. Compare this map with Fig. 45 and note the relatively smaller slaughter than receipts at Denver, Fort Worth, and other southwestern points, the difference being due to the stockers and feeders handled at these markets. (See Fig. 47.)

spring, it is to be expected that the greater number should go to market during that season of the year (see Fig. 50). During the 10-year period 10 per cent of all calves were slaughtered during May. April, which was next in importance, averaged almost as many.

A few years ago a study of cattle slaughter was continued during a 30-months' period from July, 1918, to December, 1920, which included a segregation of animals slaughtered by classes (see Fig. 52). It showed that while, as a rule, supplies of each class of cattle are largest during the period

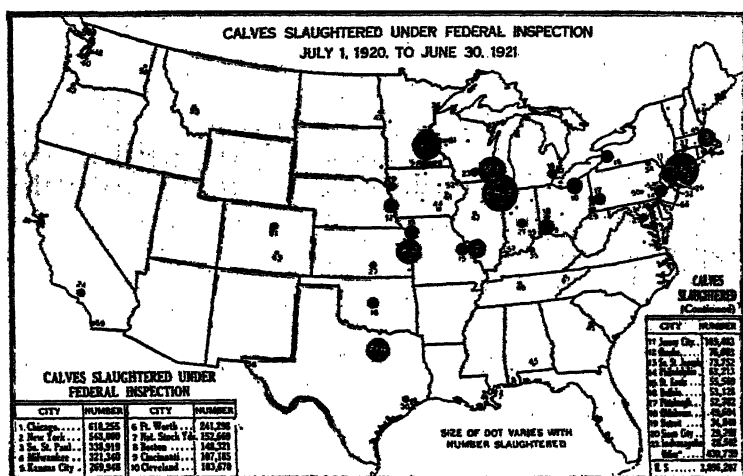


FIG. 54.—Compare this map with that of beef calves, Figure 22, and note the large slaughter at Boston, New York City, Cleveland, and Milwaukee, which are located in dairy rather than beef districts. Undoubtedly a large proportion of the slaughter at these and other northeastern points is of dairy calves. A dot on this map represents about the same number of animals as a dot of the same size in Figure 53, regardless of size of the maps.

when total supplies are heaviest, variations in the number of cows slaughtered at different seasons are wider than those of any other class of stock, and that irregularity in receipts of cows is largely responsible for the extreme variations in the number of cattle slaughtered. Considering the 30 months as a whole, while steer slaughter ranged from 36 per cent of all slaughter in November to 62 per cent in May, cows slaughtered ranged from 20 per cent in May to 47 per cent in November. In other words, the marketing of cows is much more uneven than that of steers.



The relative proportions of the two classes of cattle as they arrive at public stockyards, however, do not vary as widely as does the slaughter, for the reason that during the fall a considerable proportion of the steers are returned to the country as stockers and feeders. This seasonal glut of cows is a matter of considerable consequence to the cattleman.

#### Price a Factor in Cattle Marketing.

Price is the most important factor in marketing cattle. It attracts supplies and moves them from place to place. Neither distance, time, nor almost any other consideration is too great an obstacle to be overcome, provided the price is high enough to warrant the effort. Cattle are shipped not only the 2,000 miles from the Pacific coast to Corn Belt markets, but also later from Chicago to England, covering 1,000 miles by rail and 3,000 miles by water, simply because the price is sufficient to make the transaction profitable. While the general movement of cattle is from west to east, a shift in prices sometimes reverses the usual order of things, as in the winter of 1921, when considerable numbers of meat animals were shipped from middle western markets to the Pacific coast.

In the following discussion Chicago prices are used unless otherwise specified. This policy is followed primarily because Chicago is the base market of the country, and also because the flow of cattle to Chicago is probably more uniform as regards the various classes and grades than to any other market.

A study of monthly average prices of good beef cattle from 1901 to 1921 (Fig. 55) develops the fact that during the first seven years of this period the market was relatively steady, extreme fluctuations amounting to only \$2.70 per 100 pounds. Beginning with August, 1901, prices moved upward and continued in that direction for approximately a year. The peak was reached in July, 1902, the net advance for the year amounting to \$2 per 100 pounds. This advance was wholly lost during the next six months, and during the next five years the market was fairly steady, the average price of good beef cattle for that period being very close to \$5 per 100 pounds.

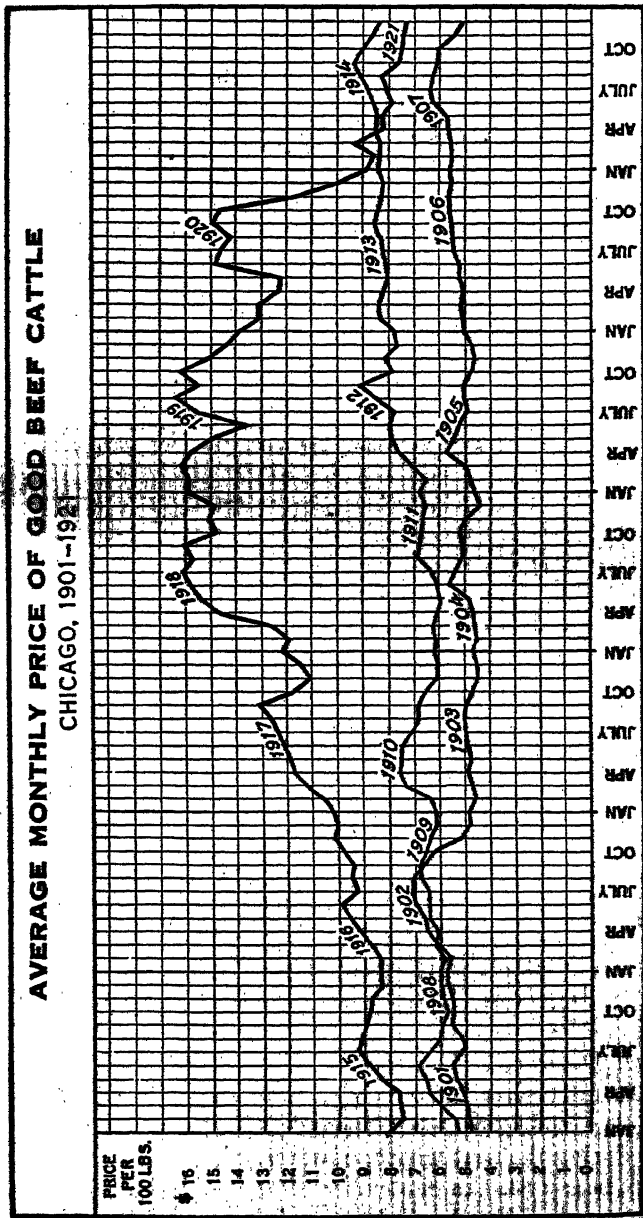


FIG. 65.—During the 21 years from 1901 to 1921, inclusive, September prices of good beef cattle averaged the highest in five of the years, and August each in four years, June in three years, April in two years, November and December each in one year. During the years 1901 to 1911, the price ranged usually between \$5 and \$7 per hundred pounds, then rose during the years 1912-1915 to between \$8 and \$9. By July, 1918, the price had doubled and remained around \$16 for over a year. Early in November, 1920, the market broke sharply, dropping \$3 per hundred in less than three months, and by December, 1921, the average price had fallen to about \$11.40, which was below the prewar level.

In 1908 prices advanced about \$1 per 100 pounds, and up to 1912 the average ranged from \$6 to \$7 per 100 pounds. In 1912 the market advanced about \$2, but before the end of the year lost about half of the advance. During the next two years prices were again fairly steady, but in 1915 a strong upward movement began which, with several sharp recessions, continued until August, 1919. During that month the market reached the highest point touched during the 21 years under discussion. The average price of good beef steers in

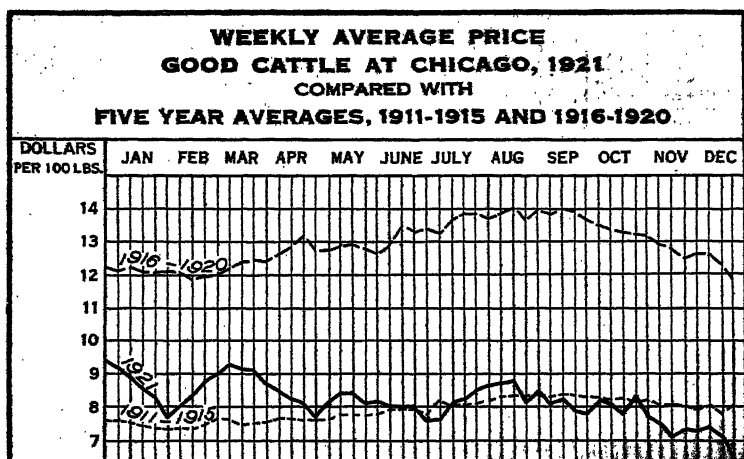


FIG. 56.—The seasonal trend of cattle prices in 1921 was abnormal, beginning at about \$9.40 per hundred pounds the first week in January, the average price of good beef cattle remained between \$8 and \$9 during most of the summer and declined to \$4.40 the last week in December. The normal seasonal trend, as shown by the averages for the periods 1911-1915 and 1916-1921, is a gradual rise in price through the spring and summer months, followed by a corresponding descent during the late autumn and winter.

that month was \$16.45, which was \$12.05 above the low point of \$4.40 in December, 1904, or an increase of nearly 274 per cent.

Between October, 1919, and May, 1920, a bad break occurred, the net decline for the eight months period amounting to approximately \$4 per 100 pounds. There was a quick recovery during the next month, however, which carried the market up nearly \$3. In September, 1920, liquidation began in earnest; and with only slight recoveries intervening, the market continued downward to the end of 1921. During that 16 months period monthly average prices broke from

**MONTHLY AVERAGE VALUE PER 100 POUNDS  
GOOD BEEF CATTLE, CHICAGO, 1910 - 1921  
EXPRESSED IN BUSHELS OF CORN**

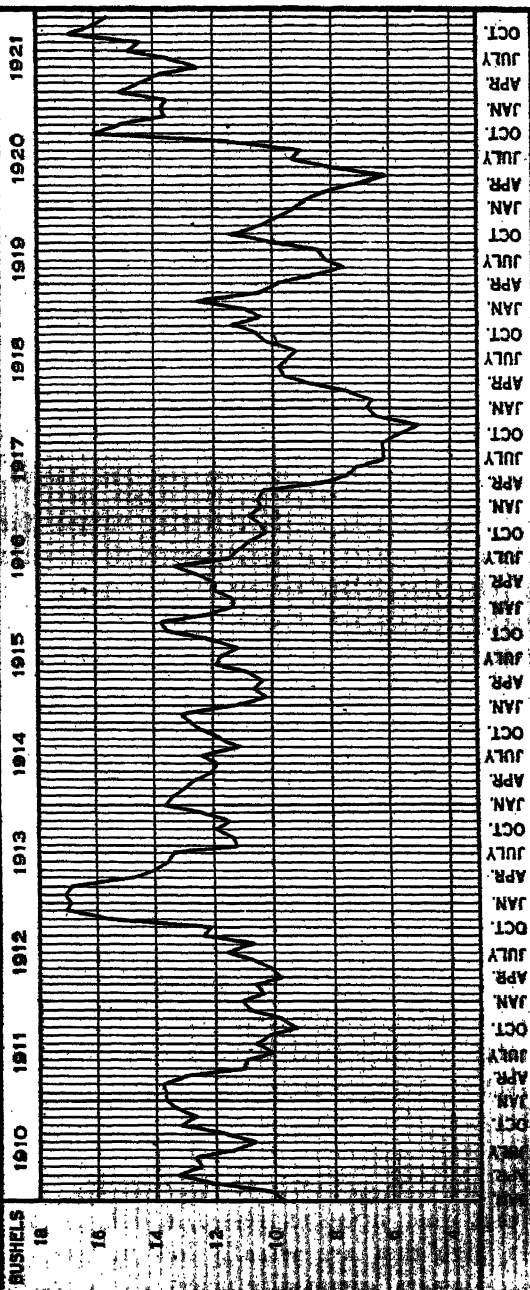


Fig. 10—Showing ratio between cattle and corn prices during the 12 years from 1910 to 1921, inclusive, was highest in February, 1912, when the value of good beef steers at Chicago per 100 pounds equaled that of 17.2 bushels of corn. The ratio was lowest in November, 1911, when 100 pounds of live cattle had a value equal to 5 bushels of corn. In general, 10 to 14 bushels of corn have a value equal to 100 pounds of cattle. In 1921 corn was cheap compared with cattle, 100 pounds of cattle equalling about 13 bushels of corn. Note that the scale of the graph has not been carried down to zero.

\$14.95 to \$7.31, a decline of \$7.64, or more than 50 per cent. The decline in weekly average prices amounted to \$9.15 per 100 pounds, or nearly 59 per cent.

Prices at public markets show seasonal fluctuations, just as receipts do. While general price levels vary from year to year, the upward and downward swings occur, on the average, at about the same season of the year. There is, of course, a rather close correlation between these price swings and variations in available supplies. Using weekly average prices for two five-year periods, 1911-1915 and 1916-1921 (Fig. 56), it is found that good beef-cattle prices are usually highest in August and September and lowest in December, January, or February.

#### Cattle Prices Expressed in Corn and Purchasing Power.

There are various ways of expressing values other than in terms of money. Because corn is such an important factor in the production of beef the price of beef cattle may properly be shown in bushels of corn (Fig. 57). Such a presentation, covering a 12-year period from 1910 to 1921, inclusive, indicates a wide variation from time to time in the relative values of beef cattle and corn. For example, in February, 1913, the price of 100 pounds of good beef cattle was equivalent to that of 17.19 bushels of corn, whereas in November, 1917, 100 pounds of beef cattle equaled in value only 5.02 bushels of corn.

In May, 1920, 6.06 bushels of corn equaled in value 100 pounds of beef cattle, whereas less than one and one-half years later, or in October, 1921, it required 16.87 bushels of corn to equal in value 100 pounds of beef cattle. The importance of studying such ratios lies in the fact that when corn is relatively high cattle feeders are inclined to sell corn rather than to feed it to cattle. When, however, corn is relatively cheap, a higher return is sought by feeding it to cattle.

Another way in which cattle prices may be expressed is in terms of purchasing power of other commodities. It may happen that when prices expressed in dollars and cents are relatively high they are actually low in comparison with the level of general commodity prices. It is not of so great importance how much money the stockman gets for his cattle as how many things he can receive in exchange for his cattle.

A comparison of cattle prices with their purchasing power in terms of general commodities from 1878 to 1921 (Fig. 58) shows that during the first 33 years of that period, or up to 1912, cattle were relatively higher in price than other commodities. From 1912 to 1914 they were about equal, but in 1914 the purchasing power began to decrease, and from 1915 to 1919, while cattle prices had a sharp advance, the advance did not equal that in the price of general commodities, and for that reason the purchasing power actually decreased. From 1919 through 1921 both cattle prices and purchasing

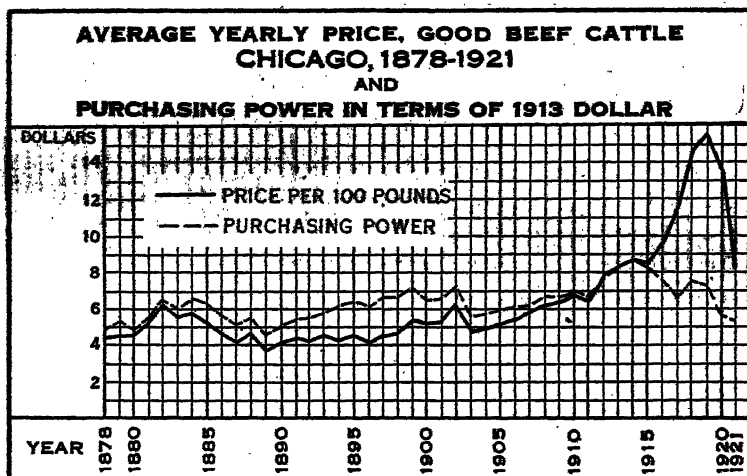


FIG. 58.—Since 1878 the lowest yearly average price of good beef cattle was reached in 1889, the price being \$3.80 per 100 pounds. The highest yearly average price, \$15.50, was reached in 1919. But 100 pounds of cattle would purchase more commodities (food, clothing, etc.) in 1914 than in any other year, and less in 1921 than in any year since 1890. Similar prices by months since 1913 are shown in Figure 63.

power had a sharp decline, but up to the end of 1921 the purchasing power of cattle was still considerably below the actual price.

#### Live Steer Prices Compared with Beef.

A comparison of yearly average prices of live steers, whole sale beef, and certain retail cuts from 1913 to 1921, by expressing each in per cent of increase or decrease of its 1913 average (Fig. 59), develops the fact that from 1913 to 1916 prices of live steers and of wholesale and retail beef fluctuated, as a rule, in about the same proportion. From 1916 to 1919, however, steer prices advanced much more, proportion-

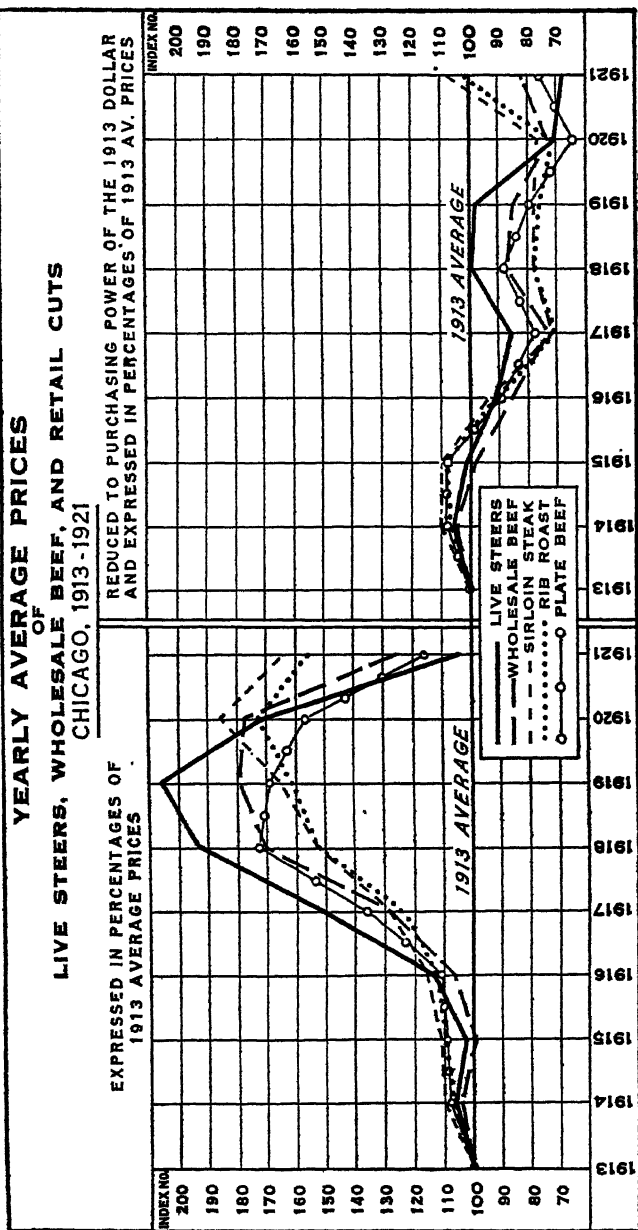


FIG. 59.—The early average prices of live steers from 1916 to 1918 showed a more rapid rise than either prices of wholesale beef or retail cuts. The increase in 1919 over 1918 was at about the same rate, but from 1919 to 1920 the yearly average price of steers declined sharply, whereas the price of wholesale beef dropped very little, and the prices of sirloin steak and rib roast continued to advance. The price of steers in 1921 was practically at the 1913 level, while wholesale beef was 25 per cent above, and the more expensive retail cuts were 50 to 70 per cent above 1913 prices. The right-hand side of the graph shows that since 1915 the prices of cattle and beef have been lower than the average price of other commodities, compared with the 1913 levels.

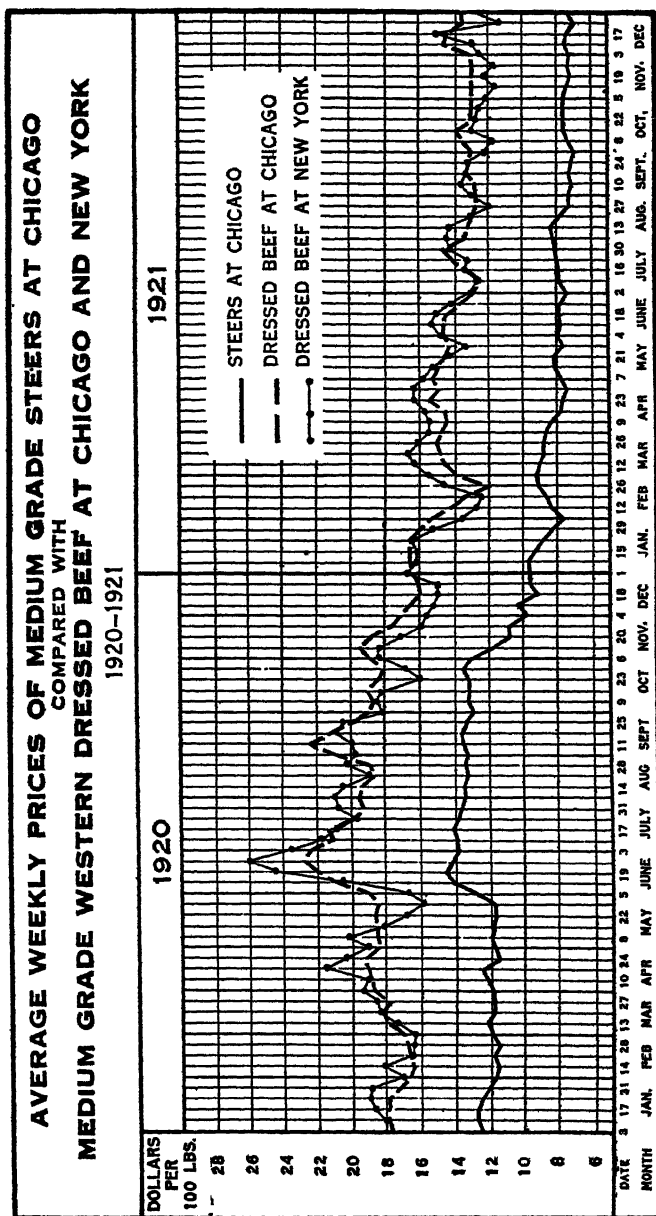


Fig. 60.—Weekly average prices of live steers at Chicago fluctuated less widely during 1920 and 1921 than prices of dressed beef (wholesale) of corresponding grade at Chicago and New York. Despite transportation and other costs involved in getting dressed beef from Chicago to the Atlantic seaboard, New York prices were frequently lower than those at Chicago. It should be noted that the graph is not carried downward to the zero line, consequently the spread between prices of cattle and dressed beef is much less proportionately than indicated. But it is significant that whereas in 1921 the price of steers decreased over one-third as compared with 1920, the spread between the prices of steers and of dressed beef remained almost unchanged.



ately, than did either wholesale or retail beef prices. The peak year for live steers was 1919, and in that year prices averaged 106 per cent over the 1913 level. Chicago wholesale beef prices, however, were 79 per cent over the 1913 average.

It is noteworthy in this connection that retail prices of plate beef were highest a year earlier, or in 1918, whereas retail prices of sirloin steak and rib roast averaged highest a year later, or in 1920. Of the retail cuts considered, sirloin steak showed the greatest advance, but even at the high-

est point, sirloin steak was only 85 per cent above the 1913 average, as compared with 106 per cent in live steers.

Although live steers showed the greatest proportionate advance, the decline was sharper and much more precipitous than was that of either wholesale or retail beef prices. This is indicated by the fact that the 1921 average price of live steers was only 85 per cent above the 1913 average, whereas wholesale beef prices were 25 per cent and retail prices of plate beef 16 per cent above

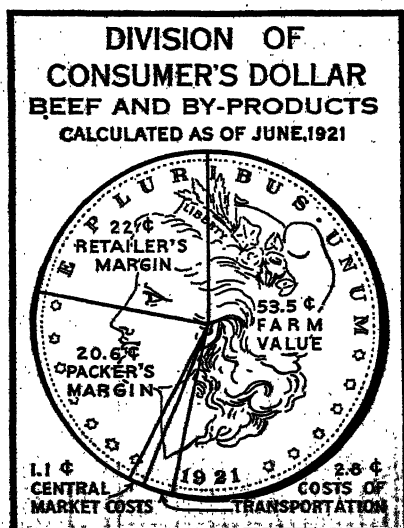


FIG. 61.—Where does the consumer's dollar go? is always a pertinent question. A computation made in June, 1921, indicated that a little over half went to the cattle producer.

that level. For that year the average retail price of sirloin steak was 64 per cent and of rib roast 55 per cent above the 1913 average.

Expressing the above increases and decreases in terms of the purchasing power of the 1913 dollar, it is found that during 1914 the purchasing power of not only live steers but also wholesale and retail beef cuts exceeded that of 1913. The same was true of steers and retail cuts in 1915, but wholesale beef had dropped 2 per cent below the 1913 average. By 1916, however, the purchasing power of all of these commodities had fallen below that level and remained so

through 1920. In 1918 the purchasing power of live steers came within 2 per cent of equaling the 1913 average, but that of wholesale and retail beef cuts was considerably below that level. (See right-hand side of Fig. 59.)

In 1920 a divergent movement occurred. The purchasing power of live steers had dropped 3 per cent below that of wholesale beef, 6 per cent below sirloin steak, and 1 per cent below rib roast, and was only 6 per cent above plate beef. In 1921 the purchasing power of live steers was 32 per cent under the 1913 average, while rib roast was 1 per cent and sirloin steak 7 per cent above that level.

Beef is the most important product resulting from cattle slaughter. For that reason it is reasonable to expect a rather close correlation between the price of beef cattle and wholesale dressed beef. A comparison of weekly average prices of beef cattle at Chicago with wholesale prices of a corresponding grade of beef at Chicago and also at New York for the two years 1920 and 1921 (Fig. 60) shows that in general cattle prices were steadier than beef prices; that any pronounced or sustained variation in the price of one usually resulted in a similar movement in the price of the other; that beef prices at Chicago, as a rule, fluctuated less widely than those at New York; that at Chicago the differential between the price of cattle and wholesale prices of beef is fairly constant; and, finally, that despite the added costs of transportation and other charges involved in getting beef from Chicago to the Atlantic seaboard, New York prices were frequently lower than those at Chicago. In fact, in the two years considered, during one week New York prices averaged the same as Chicago, during 52 weeks they were higher, and during 51 weeks, or nearly 50 per cent of the time, they were lower.

Another factor which has considerable bearing on cattle prices is the demand for the important by-products, such as hides, tallow, and oleo oil, and the prices resulting therefrom. A comparison of such prices (Fig. 62) before, during, and following the war shows that under normal conditions there is a fairly close correlation between prices of cattle and of these three commodities. During 1915 and 1916 this was rather marked. Early in 1917, however, the World War began to exert a rather powerful influence over prices of

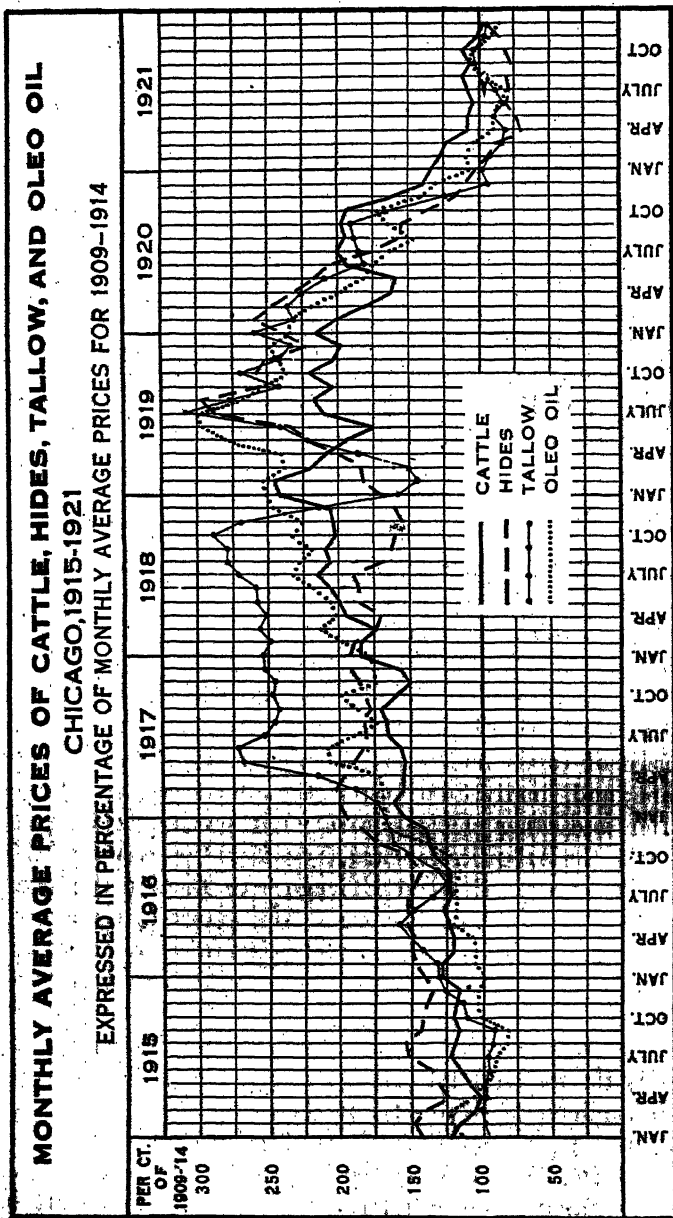
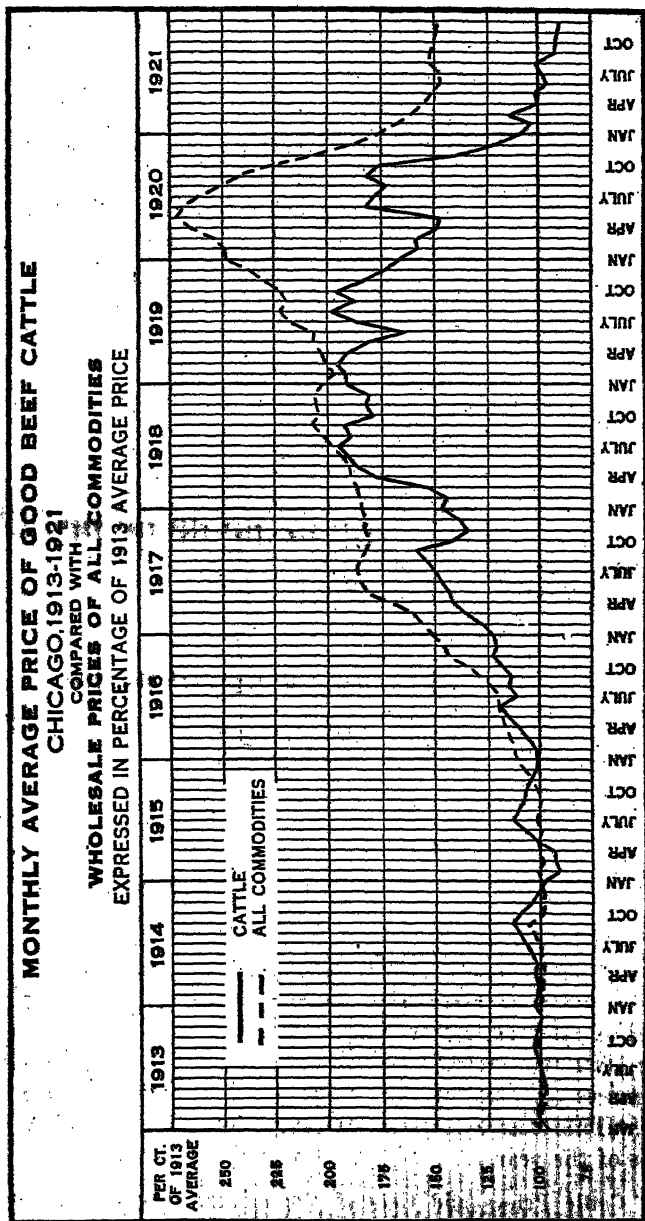


FIG. 62.—Normally there is a rather close correlation between the prices of cattle and those of the important by-products, such as hides, tallow, and oleo oil. This is shown in the above graph during the years 1915 and 1916, 1920, and 1921. During and immediately following the war, however, the product values fluctuated over a wide range and at times seemed to have little or no relation to the price of cattle. Note the relatively low prices of by-products as compared with cattle prices during 1921.



From the first of January, 1918, to the close of 1915 wholesale prices of all commodities, including beef cattle, were fairly steady. Then, in 1916, all prices began to advance and the general commodity index continued almost steadily upward until May, 1917. From May, 1917, prices advanced more slowly during 1917, but by July, 1918, had almost overtaken commodity prices. After this 1918 advance prices made practically no advances and were declining in 1919 and during the early part of 1920, when commodity prices were advancing. At the close of 1921 cattle prices were 11 per cent below the 1913 average, while other commodities were still 45 per cent above that level. Note that the scale of the graph is not carried down to zero.

most commodities. As a result of this, tallow prices advanced out of all proportion to the advance in either cattle or other important by-products.

On the signing of the armistice near the close of 1918, tallow prices fell precipitately, whereas cattle and oleo oil, being more particularly peace-time articles of trade, advanced. In the speculative period of 1919 practically all by-product prices went even higher than they had during the period of actual conflict, while cattle prices declined sharply. Toward

**NUMBER OF 1000 POUND CATTLE  
REQUIRED TO PURCHASE  
A WAGON, A CORN BINDER, A GRAIN BINDER AND A GANG PLOW  
IN ILLINOIS IN 1913, IN 1920 AND IN 1921.**

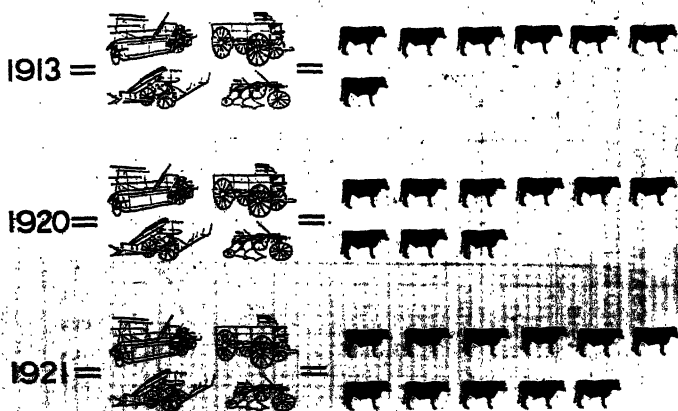


FIG. 64.—In 1913 seven cattle in central Illinois would purchase a wagon, a corn binder, a grain binder, and a gang plow, whereas in 1920 two more cattle were required, and in 1921 four more cattle. (See Figs. 58 and 63.)

the end of the year, however, there was a readjustment, and during 1920 and 1921 the normal close relationship between cattle prices and those of hides, tallow, and oleo oil was maintained. This was especially striking during the last few months of the year.

#### Cattle Prices and General Commodity Prices.

Having considered the effect on cattle prices of the factors most closely related to cattle, it remains to discover how cattle prices respond to changes in the general level of com-

modity prices. (Figs. 63 and 64.) From the beginning of 1913 to June, 1916, cattle prices and general commodity prices showed a fairly close relationship. At times cattle were slightly higher and at other times slightly lower than the level of other important commodities. Early in 1916, however, all prices, including those of cattle, started upward, and so far as general commodities were concerned the trend, with only one or two rather slight interruptions, continued until May, 1920. Although cattle prices shared to a certain

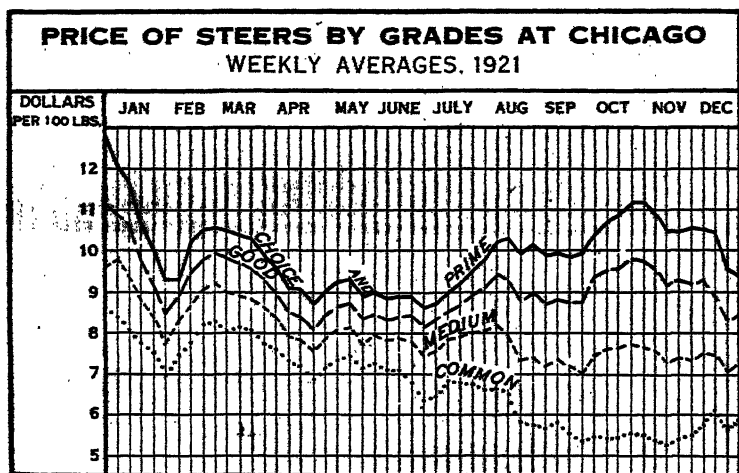


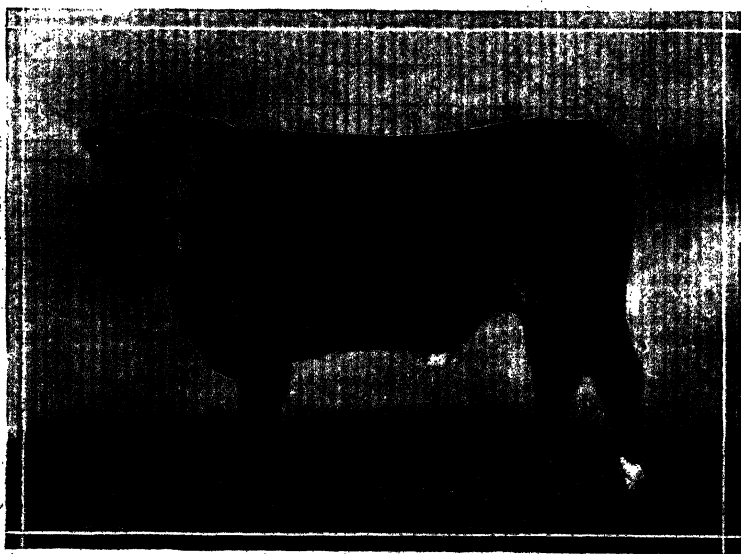
Fig. 65.—Grade in large measure determines the price paid for cattle. In the late spring, when fattened cattle are being received from the feed lots in large numbers and the movement of common cattle from the Western Range is light, the difference in price between choice and common steers is much less than in the fall months when the conditions are reversed. (See Fig. 52.) It is interesting to note that in 1921 the price of choice steers was higher in the fall months than in the spring, and the price of common steers was much lower. The scale of the graph is not carried down to zero.

extent in this movement, at no time after the middle of 1916 did their rise equal the rise in general commodity prices. Not only was that true, but cattle prices reached their peak in August, 1919, whereas general commodity prices continued upward almost a year longer.

During the reconstruction period of 1920 and 1921 cattle prices not only took their full share of liquidation, but closed the year 1921 below the pre-war average, while general commodity prices were still nearly 50 per cent above that level.

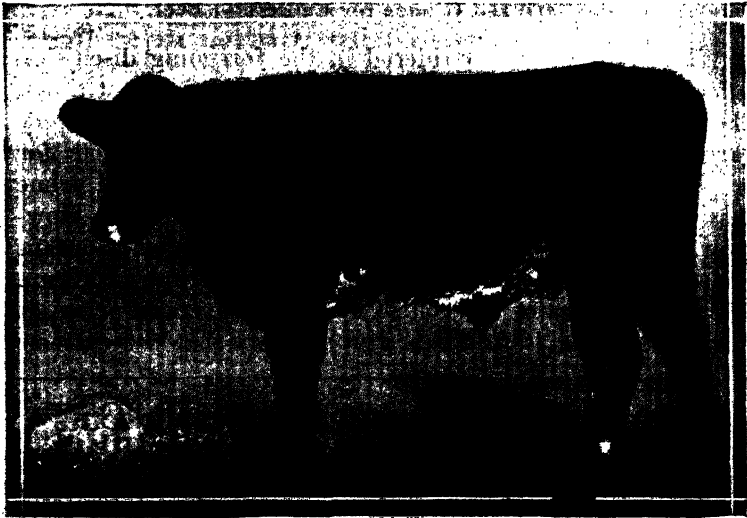


Choice Beef Steer.



Good Beef Steer.

FIG. 28.—In market practice a distinction is made between "beef" steers and "feeder" steers. In general, "beef" steers are those which go to slaughter, and "feeder" steers those which are returned to the country for further feeding. Four grades of beef steers—choice, good, medium, and common—are illustrated on this and the opposite page. Note in the choice



Medium Beef Steer.



Common Beef Steer.

steer the straight, broad back, the thick loin and fat cover, the depth of rib and flank, and the generally smooth, rounded, firm, even covering of fat. Also note that the lower grades of steers are less or more of these characteristics. Comparison with the common steer, grade, for grade, the chief difference between "beef" and "feeder" steers, consists in the conformation and the amount of meat and fat carried. The "feeder" steer shows ability to put on fat and flesh if properly fed, whereas the "beef" steer shows the results of feeding.



## Standardized Grades for Cattle and Beef.

While the factors considered in the foregoing discussion affect cattle prices in varying degrees and at different times, there is another factor which operates at all times and very largely determines the price which the producer gets for his beef animals. That factor is grade. Choice and prime cattle invariably bring more money than do common. However, the price differentials between grades are by no means constant, as may be seen by considering the graph in Figure 65, which indicates the course of weekly average prices at Chicago during 1921. This graph shows that the extreme

## Side of Beef Showing Wholesale Cuts

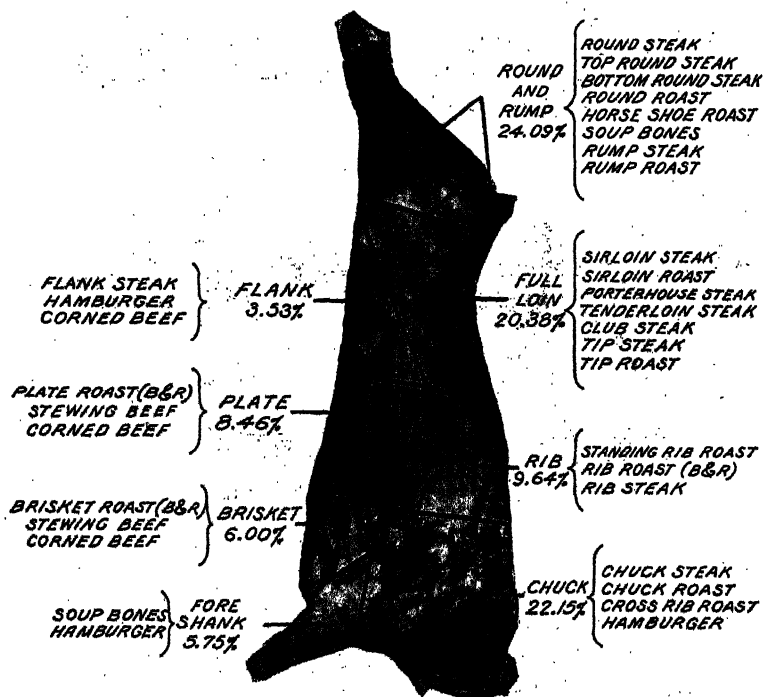


FIG. 67.—Side of beef and important wholesale and retail cuts. There are numerous ways of cutting up a beef carcass, the requirements of the trade in different parts of the country determining which method shall be used. The cuts shown in the above figure are based on what is known as the Chicago method of cutting. Figures appearing under the name of each wholesale cut indicate the per cent of the total weight of the side represented by that cut.

range in prices of beef steers was widest during the latter part of October and narrowest during the last week of May. Although there are certain variations in the time when these expansions and contractions in the price range occur, a differential between the grades is always present.

Because grade so largely determines the price, the existence or lack of a standardized system of grading becomes a matter of vital importance to the producer of beef animals. Until very recently no such system existed. Heretofore most

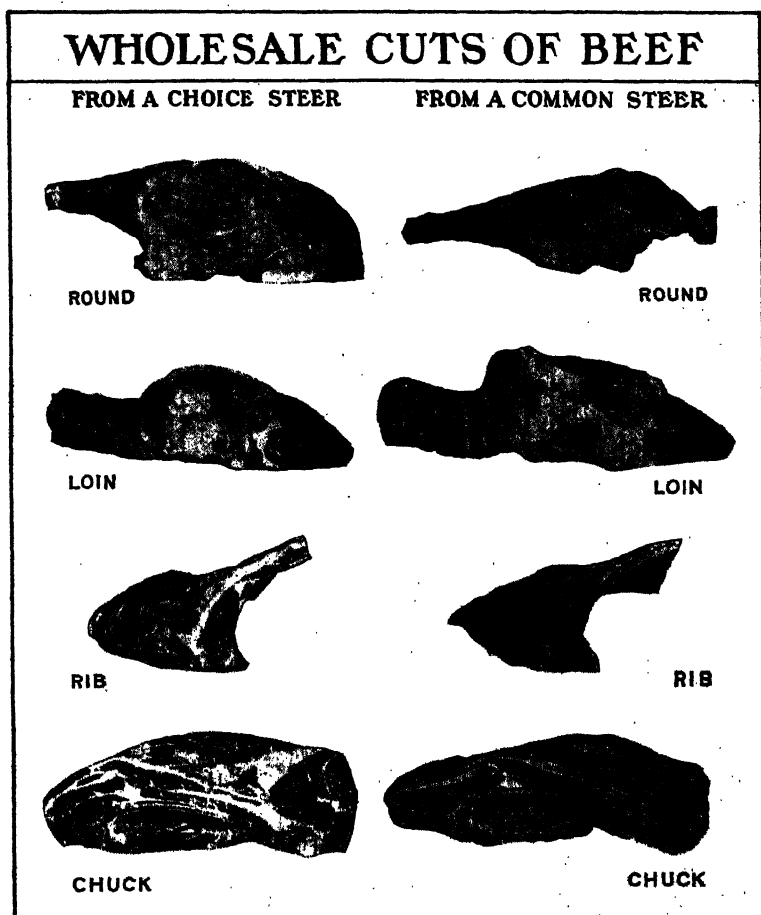


FIG. 68.—The difference in appearance between the meat of a choice and that of a common beef steer. Note the greater thickness, covering of fat, and marbling of fat in the lean in the cuts from the choice steer. The choice cuts are also more tender and palatable, and therefore in greater demand.

live-stock markets have used a certain group of trade terms to designate classes and grades of cattle and to describe market and trade conditions. The definitions of these terms, however, varied not only between markets but even at the same market at different seasons of the year. This situation made it virtually impossible to interpret market reports accurately.

The United States Department of Agriculture has endeavored to assist in solving this problem by adopting a standard set of classes and grades for cattle and calves and formulating simple and easily understood definitions for each.

Cattle and calves for slaughter have been divided into seven classes: Steers, baby beef, heifers, cows, stags, bulls, and veal calves. Some of these are still further divided into subclasses based on weight, such as heavyweights, mediumweights, and lightweight.

Having grouped the animals in these seven classes, such grouping being based largely on sex and age, each class is further subdivided into grades. Although the number of grades varies somewhat between classes, the more important grades are: Prime, choice, good, medium, and common, four of which are illustrated in Figure 66. Virtually the same classification has been applied to stocker and feeder cattle and calves.

As there is even more confusion in the minds of most people regarding the various classes and grades of dressed meats than of live animals, a similar classification of dressed beef and veal has been made. These grades of the dressed meat correspond with those of the live animals. In other words, a "choice" steer must produce "choice" beef and a "common" steer "common" beef.

As a basis of understanding the classes and grades of beef, an idea of the important wholesale and retail cuts, their location in the carcass, and the percentage of the total weight of the "side" which each cut comprises, is necessary (see Fig. 67).

Methods of cutting up a beef carcass vary in different parts of the country, and it is obvious that the number of pounds in the different cuts and the percentage of the carcass weight represented by a given cut will depend upon

the method of cutting adopted. The Chicago system of cutting is more widely used than any other. However, as a large percentage of the total amount of beef produced is consumed along the Atlantic seaboard, the various eastern methods of cutting beef are also of interest and importance. Table 10 shows the result of a cutting test made in Washington, D. C., late in 1921.

The difference between choice and common beef with respect to texture, fiber, quantity, and distribution of fat is shown in Figure 68.

With a standardized system of grading both cattle and beef generally understood and in common use, the producer will be able to market his live stock more intelligently and therefore more profitably, and the consumer will be in position to purchase his meat more wisely and economically on account of his more thorough and definite knowledge of market conditions.

TABLE 10.—*The weights of the wholesale and retail cuts of an open side of beef weighing 291 pounds.<sup>1</sup>*

|                              | Pounds. |                           | Pounds. |
|------------------------------|---------|---------------------------|---------|
| Round and rump (62 pounds) : |         | Chuck (58 pounds) :       |         |
| Top round steak.....         | 12      | Chuck roast.....          | 32      |
| Bottom round steak.....      | 11      | Cross rib roast.....      | 11      |
| Round roast.....             | 2½      | Boneless neck.....        | 9       |
| Rump roast.....              | 12½     | Fat.....                  | 1½      |
| Shank meat.....              | 9½      | Bones.....                | 4½      |
| Soup bones.....              | 5½      | Flank (9½ pounds) :       |         |
| Fat.....                     | 1½      | Flank steak.....          | 1½      |
| Bones.....                   | 7½      | Lean trimmings.....       | 3½      |
| Full loin (65 pounds) :      |         | Fat.....                  | 4½      |
| Sirloin.....                 | 22      | Plate (20½ pounds) :      |         |
| Porterhouse steak.....       | 17½     | Stewing beef.....         | 20      |
| Tip steak.....               | 5½      | Lean trimmings.....       | ½       |
| Tip roast.....               | 5½      | Brisket (21½ pounds) :    |         |
| Hanging tenderloin.....      | 2       | Sticking piece.....       | 4½      |
| Kidney.....                  | 1       | Stewing beef.....         | 16½     |
| Suet.....                    | 9½      | Fat.....                  | 1½      |
| Fat.....                     | 1       | Fore shank (22½ pounds) : |         |
| Bones.....                   | 1       | Shoulder clod.....        | 9½      |
| Rib (30 pounds) :            |         | Shank meat.....           | 5       |
| Rib roast.....               | 29      | Soup bones.....           | 4       |
| Bones.....                   | 1       | Bones.....                | 4       |

<sup>1</sup> Loss in making wholesale cuts 1½ pounds, due largely to the fact that in weighing the cuts one-fourth pound was the smallest unit considered.

However, the matter of standardized grading, important as it is, is only one of the problems involved in marketing beef cattle. Many different agencies are involved in getting cattle from the farm or ranch to the consumer. Among the important ones are the country buyers or cooperative shipping associations, transportation companies, feeding stations, stockyards, commission men, packers and slaughterers, cold-storage establishments and warehouses, wholesale and retail meat dealers, and banks and loan companies. These are links in the chain which connects the cattle producer with the consumer of beef and beef products. If there is a break or weak point in the chain, both producer and consumer are bound to be affected.

Each of these agencies constitutes a distinct problem, but there are many more. Price fluctuations, competition for both the domestic and foreign markets, and lack of accurate and unbiased market news are among the most outstanding. All of these problems must be solved if the producer of beef cattle is to obtain the fullest returns for his efforts and the consumer is to obtain beef and veal of satisfactory quality at a fair price.

### Consumption of Beef.

Consumption is the aim and inspiration not only of all production but of all marketing. If there is little consumptive demand for a commodity, prices will soon decline to a point below the cost of production and ultimately both production and marketing will cease. While consumption exerts a powerful influence over prices, there is a reciprocal action in which prices vitally affect consumption. The demand for beef and veal on the part of the consuming public is by no means as constant as many suppose, but varies widely over a period of time.

Exact data showing per capita consumption of beef and veal are not easily obtained and are not available over any considerable time. The most accurate figures pertaining to this matter begin with 1907, shortly after Federal inspection of meat was first inaugurated. Considering the 15 years, 1907 to 1921, inclusive, per capita consumption has ranged from 87 pounds in 1907 to 60 pounds in 1915, a net variation of 27 pounds per capita (Fig. 69). When these per capita

figures are converted into total consumption by multiplying them by the total population, the importance to the cattle producer of such a variation in consumption at once becomes apparent. The consumption of beef per capita has declined rather steadily during the past 15 years. If the two periods, 1907 to 1910 and 1911 to 1921, are compared, the decrease in consumption per capita amounts to approximately 20 per cent (Fig. 71 and Tables 11 and 13).

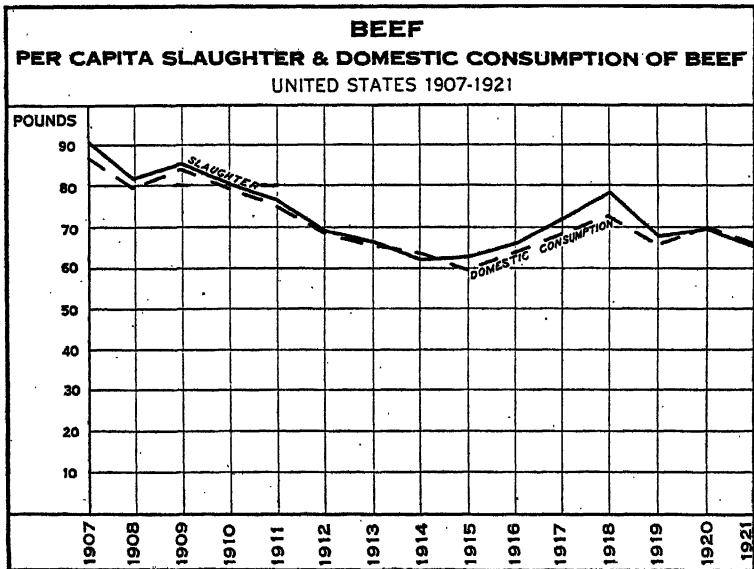


FIG. 69.—From 1907 to 1921, inclusive, excepting 1914, the amount of beef and veal slaughtered per capita in the United States has been slightly greater than the amount consumed, the surplus being exported. In 1914, imports exceeded exports, consumption being greater than the domestic slaughter. The downward trend in per capita consumption from 1907 to 1914, reversed during the war period, but during the last three years trending downward again, is significant.

The problem is still further complicated for the producer by the fact that one market wants heavy beef and another light beef. High-class hotels in the large cities want prime, fat, and finished beef, while the average housewife wants beef involving less waste. In warm weather the chief demand is for steaks and chops, while the winter trade demands more roasts and boiling beef. The orthodox Jewish trade uses only the forequarters, while gentiles, as a rule, prefer hindquarter beef.

Not only is the total and per capita consumption of interest but it is worth while to inquire where the bulk of the beef and veal produced in the United States is consumed

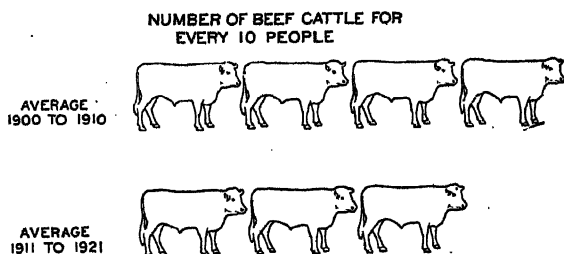


FIG. 70.—The average number of beef cattle in the United States for every 10 people decreased from 4.2 head for the years 1900–1910 to 3.1 head for the years 1911–1921, or 26 per cent. See Table 11 for statistics of consumption.

(Figs. 72 and 73). A survey made in 1920 indicated that at that time nearly 32 per cent was consumed in the North Atlantic States, which comprise New England, New York, Pennsylvania, and New Jersey. The next largest quantity, or 24 per cent, was consumed in the east-north-central division. In other words, more than 55 per cent of the total consumption of beef and veal occurred in the territory east of the Mississippi and north of the Ohio River and Maryland. The smallest total consumption occurred in the South Atlantic division, comprising the States of Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida. Per capita consumption showed almost as wide variations between divisions of the country as did total consumption, ranging from 83 pounds in the Western division to 39 pounds in the South-Central. The North Atlantic division, which was first in total consumption, was second in per capita consumption.

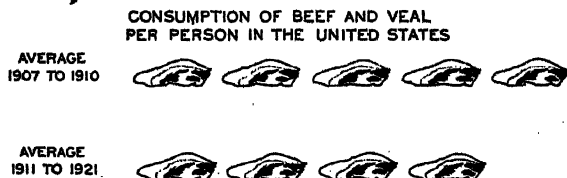


FIG. 71.—The per capita consumption of beef and veal in the United States decreased from 82 pounds in the period from 1907 to 1910, inclusive, to 67 pounds in the period 1911 to 1921, inclusive, or 18.2 per cent. This per capita decrease in consumption is smaller than the decrease in number of animals (see Fig. 70), a fact which is accounted for by the smaller net exports of cattle and beef in recent years, the slaughter of animals at an earlier age, and the increasing supply of meat from dairy cattle.

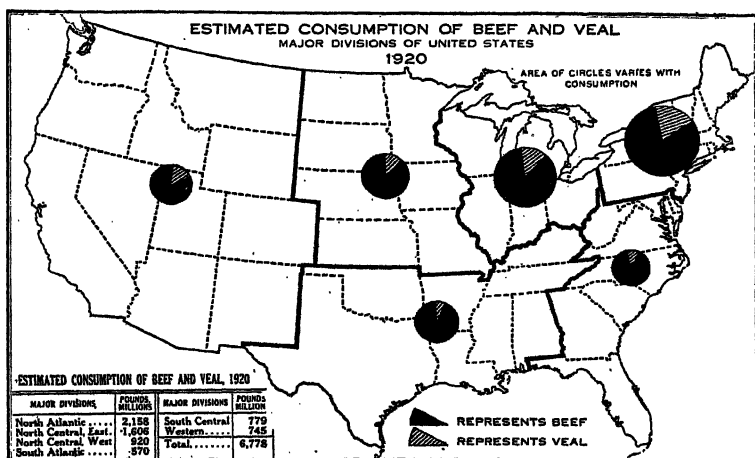


FIG. 72.—The size of the circles shows the relative quantities of beef and veal consumed in the six geographic divisions of the United States, as estimated by the Bureau of Agricultural Economics. In 1920 the North Atlantic States consumed about 32 per cent of the total consumption of the United States, and the East North Central States about 24 per cent, these two divisions consuming over half of the beef and veal of the nation. The per capita consumption in the Northern States was about 75 pounds, in the Western States about 85 pounds, and in the Southern States about 40 pounds. (See Figs. 21, 53, and 54.)

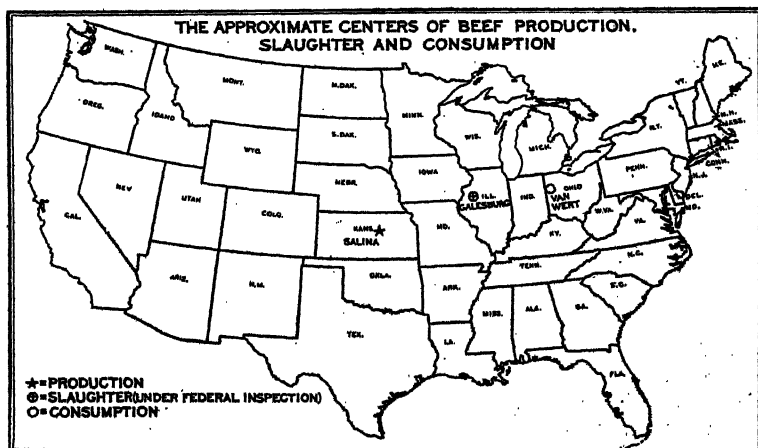


FIG. 73.—The center of beef production of the United States is in central Kansas, and the center of consumption is in western Ohio, over 700 miles eastward. Between these two centers is the center of slaughter under Federal inspection, which indicates the general eastward movement of beef before, as well as after, slaughter. These centers were found by determining the intersection of north and south and east and west lines which divide the production, slaughter, and consumption, respectively, into four equal parts.



TABLE 11.—*Estimated annual slaughter, exports, and consumption of beef and veal in the United States.*

## BEEF.

| Calendar year. | Slaughter.                 |                                |                            | Exports.                   | Imports<br>(less re-exports). | Consumption.               |                |
|----------------|----------------------------|--------------------------------|----------------------------|----------------------------|-------------------------------|----------------------------|----------------|
|                | Total.                     | Feder-<br>ally in-<br>spected. | Other.                     |                            |                               | Total.                     | Per<br>capita. |
|                | <i>Million<br/>pounds.</i> | <i>Million<br/>pounds.</i>     | <i>Million<br/>pounds.</i> | <i>Million<br/>pounds.</i> | <i>Million<br/>pounds.</i>    | <i>Million<br/>pounds.</i> | <i>Pounds.</i> |
| 1907.....      | 7,319                      | 4,336                          | 2,983                      | 352                        | .....                         | 6,967                      | 79.7           |
| 1908.....      | 6,676                      | 3,955                          | 2,721                      | 228                        | .....                         | 6,448                      | 72.4           |
| 1909.....      | 7,071                      | 4,189                          | 2,882                      | 163                        | .....                         | 6,908                      | 76.2           |
| 1910.....      | 6,733                      | 4,054                          | 2,679                      | 110                        | .....                         | 6,623                      | 71.8           |
| 1911.....      | 6,497                      | 3,984                          | 2,513                      | 92                         | .....                         | 6,405                      | 68.4           |
| 1912.....      | 5,920                      | 3,731                          | 2,189                      | 56                         | .....                         | 5,864                      | 61.7           |
| 1913.....      | 5,913                      | 3,596                          | 2,318                      | 46                         | 35                            | 5,902                      | 60.8           |
| 1914.....      | 5,639                      | 3,601                          | 2,038                      | 95                         | 253                           | 5,797                      | 58.9           |
| 1915.....      | 5,816                      | 3,979                          | 1,837                      | 399                        | 125                           | 5,542                      | 55.7           |
| 1916.....      | 6,118                      | 4,362                          | 1,756                      | 287                        | 23                            | 5,854                      | 58.1           |
| 1917.....      | 6,686                      | 5,169                          | 1,517                      | 376                        | 25                            | 6,335                      | 62.0           |
| 1918.....      | 7,320                      | 5,638                          | 1,682                      | 728                        | 125                           | 6,717                      | 64.8           |
| 1919.....      | 6,283                      | 4,774                          | 1,509                      | 314                        | 53                            | 6,022                      | 57.3           |
| 1920.....      | 6,463                      | 4,578                          | 1,885                      | 164                        | 43                            | 6,408                      | 61.1           |
| 1921.....      | 6,194                      | 4,113                          | 2,081                      | 52                         | 23                            | 6,223                      | 57.7           |

## VEAL.

| 1907..... | 626 | 210 | 416 | ..... | ..... | 626 | 7.1 |
|-----------|-----|-----|-----|-------|-------|-----|-----|
| 1908..... | 605 | 203 | 402 | ..... | ..... | 605 | 6.8 |
| 1909..... | 684 | 220 | 454 | ..... | ..... | 684 | 7.5 |
| 1910..... | 687 | 235 | 452 | ..... | ..... | 687 | 7.4 |
| 1911..... | 657 | 229 | 428 | ..... | ..... | 657 | 7.0 |
| 1912..... | 668 | 239 | 429 | ..... | ..... | 668 | 7.0 |
| 1913..... | 488 | 176 | 312 | ..... | ..... | 488 | 5.0 |
| 1914..... | 433 | 168 | 275 | ..... | 5     | 438 | 4.4 |
| 1915..... | 428 | 168 | 260 | ..... | 1     | 429 | 4.3 |
| 1916..... | 536 | 220 | 316 | ..... | 1     | 537 | 5.3 |
| 1917..... | 662 | 296 | 366 | ..... | 1     | 663 | 6.5 |
| 1918..... | 791 | 352 | 439 | ..... | 1     | 792 | 7.6 |
| 1919..... | 860 | 378 | 482 | ..... | 5     | 865 | 8.2 |
| 1920..... | 936 | 402 | 534 | ..... | 8     | 944 | 8.9 |
| 1921..... | 888 | 391 | 497 | ..... | 4     | 892 | 8.3 |

For several years past the general trend of consumptive demand has been toward lighter cuts of meat, with a corresponding tendency to produce cattle of a lighter weight and earlier age. The consumption per capita of veal has greatly increased during the last seven years, as indicated by the increase in calves slaughtered. Lack of adequate credit

for production, high retail prices, unemployment, and anti-meat propaganda have curtailed consumption per capita considerably during the last three years.

### Trend of Beef Production.

There has been a marked change in the character of the beef-cattle industry of the United States since 1850 with respect to the age to which the animals destined for slaughter are kept on farms. In earlier years of our history steers were commonly kept to 4 or 5 years of age before slaughtering. The censuses for 1900 and 1920, in which the same age schedules were used, provide a basis for the calculations in the following table, which show that there has been an increase in the percentages of beef calves, heifers, cows, and bulls, and a decrease in the percentages of steers, especially aged steers.

TABLE 12.—*Changes in number of various age and sex groups of beef cattle in the United States (1900 to 1920).*

| Groups.                             | Estimated number, Jan. 1, 1900. | Actual number, Jan. 1, 1920. | Relation to total. |                  | Increase or decrease. |
|-------------------------------------|---------------------------------|------------------------------|--------------------|------------------|-----------------------|
|                                     |                                 |                              | 1900               | 1920             |                       |
|                                     | <i>Head.</i>                    | <i>Head.</i>                 | <i>Per cent.</i>   | <i>Per cent.</i> | <i>Per cent.</i>      |
| Calves under 1 year old.....        | 8,453,000                       | 8,809,000                    | 22.70              | 24.55            | 4.21                  |
| Heifers 1 year old and under 2..... | 3,468,000                       | 4,035,000                    | 9.31               | 11.24            | 16.35                 |
| Cows 2 years old and over.....      | 10,821,000                      | 12,730,000                   | 29.07              | 35.47            | 17.65                 |
| Bulls 1 year old and over.....      | 629,000                         | 735,000                      | 1.69               | 2.05             | 16.85                 |
| Steers 1 year old and under 2.....  | 6,448,000                       | 4,728,000                    | 17.32              | 13.18            | -26.67                |
| Steers 2 years old and over.....    | 7,412,000                       | 4,847,000                    | 19.91              | 13.51            | -34.61                |
| Total beef cattle.....              | 37,231,000                      | 35,884,000                   | 100.00             | 100.00           | -3.62                 |

About 1905 South America and Australasia became the chief sources of surplus beef. However, during the World War production in the United States was so stimulated that during 1917 and 1918 combined over 1,000,000,000 pounds of beef were exported, which was 7 per cent of our production and 22 per cent of the exports of the world during those years. At the same time our per capita consumption increased considerably.

Figures 69, 70, 71, and 74 and Tables 11 and 13 show some of the changing relations between our population and our

beef supply since 1907. There are no figures available giving separately the number of beef cattle and dairy cattle slaughtered for beef.

TABLE 13.—*Ratio of cattle to population, and of slaughter to cattle and to population, 1907–1921, with 10-year average, 1907–1916, and subsequent years in percentage of 10-year average.*

| Year.                           | Beef cattle per 100 people. | Dairy cattle per 100 people. | All cattle per 100 people. | Cattle slaughtered. |                 | Calves slaughtered. |                 |
|---------------------------------|-----------------------------|------------------------------|----------------------------|---------------------|-----------------|---------------------|-----------------|
|                                 |                             |                              |                            | Per 100 cattle.     | Per 100 people. | Per 100 cattle.     | Per 100 people. |
| 1907.....                       | 43                          | 35                           | 78                         | 20                  | 15              | 9                   | 7               |
| 1908.....                       | 40                          | 34                           | 74                         | 19                  | 14              | 9                   | 7               |
| 1909.....                       | 38                          | 34                           | 71                         | 21                  | 15              | 10                  | 7               |
| 1910.....                       | 35                          | 33                           | 67                         | 22                  | 15              | 11                  | 7               |
| 1911.....                       | 33                          | 32                           | 65                         | 21                  | 14              | 10                  | 7               |
| 1912.....                       | 30                          | 31                           | 61                         | 21                  | 13              | 11                  | 7               |
| 1913.....                       | 28                          | 31                           | 59                         | 20                  | 12              | 9                   | 5               |
| 1914.....                       | 28                          | 30                           | 58                         | 19                  | 11              | 8                   | 5               |
| 1915.....                       | 28                          | 30                           | 59                         | 18                  | 11              | 8                   | 5               |
| 1916.....                       | 31                          | 31                           | 62                         | 19                  | 12              | 9                   | 6               |
| 1917.....                       | 32                          | 32                           | 64                         | 21                  | 13              | 11                  | 7               |
| 1918.....                       | 34                          | 32                           | 65                         | 23                  | 15              | 11                  | 8               |
| 1919.....                       | 34                          | 31                           | 66                         | 20                  | 13              | 13                  | 9               |
| 1920.....                       | 34                          | 31                           | 65                         | 18                  | 11              | 14                  | 9               |
| 1921.....                       | 32                          | 30                           | 62                         | 18                  | 11              | 13                  | 8               |
| 10-year average, 1907–1916..... | 33                          | 32                           | 65                         | 20                  | 13              | 9                   | 6               |

REGARDING THE 10-YEAR AVERAGE OF 1907–1916 AS 100, THE FIGURES BELOW SHOW PERCENTAGES FOR DIFFERENT ITEMS IN SUBSEQUENT YEARS.

|           |     |    |     |     |     |     |     |
|-----------|-----|----|-----|-----|-----|-----|-----|
| 1917..... | 96  | 98 | 97  | 105 | 102 | 115 | 111 |
| 1918..... | 102 | 98 | 100 | 115 | 115 | 122 | 122 |
| 1919..... | 104 | 97 | 101 | 98  | 98  | 139 | 139 |
| 1920..... | 102 | 96 | 99  | 88  | 87  | 149 | 147 |
| 1921..... | 95  | 91 | 95  | 90  | 85  | 142 | 134 |

The number of cattle in the United States increased 12,200,000 from 1914 to 1919. During the last three years there has been a decrease of 2,000,000. The number of calves born in 1921 was over 600,000 more than in 1920, while in 1920 there were four and two-thirds millions less than in 1918. From the record established in 1918 the slaughter of cattle and calves decreased almost 1,500,000 in 1919 and 1920 com-

# NUMBER OF ALL CATTLE AND OF CATTLE OTHER THAN MILK COWS COMPARED WITH POPULATION

1850, 1860, 1867-1921

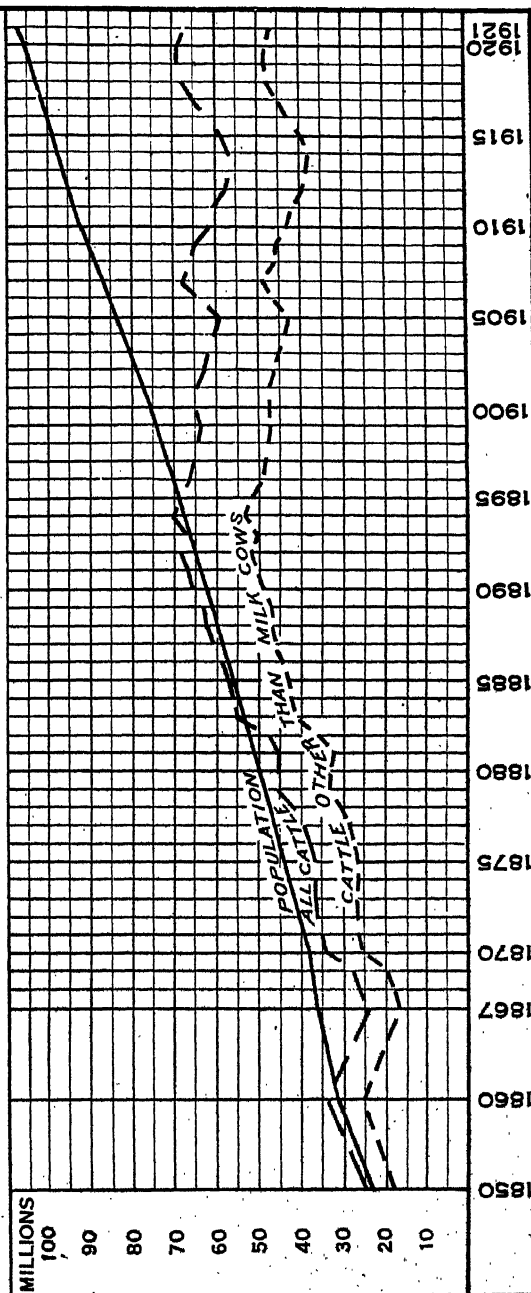


FIG. 74.—From 1850 to 1894 the total number of cattle in the United States, except during the Civil War, and also the number of cattle other than milk cows (mostly beef cattle), kept pace with the increase in population. Since 1894 both total cattle and cattle other than milk cows show no increase in number, while population has continued to increase practically a constant amount. (See Figs. 68, 70, and 71 and Table 13.)

bined, and more than 1,100,000 in 1921. Meanwhile the slaughter of calves, which had increased in numbers beyond previous records from 1914 to 1918, increased almost 1,300,000 in 1919 and almost 200,000 in 1920, but decreased almost 600,000 in 1921. This unusually large slaughter of calves in 1919 and 1920 contrasts strangely with the abrupt decline in cattle slaughter during the same period. It is accounted for partly by the droughty conditions in the West, which induced heavy marketings of young stock during 1919, and

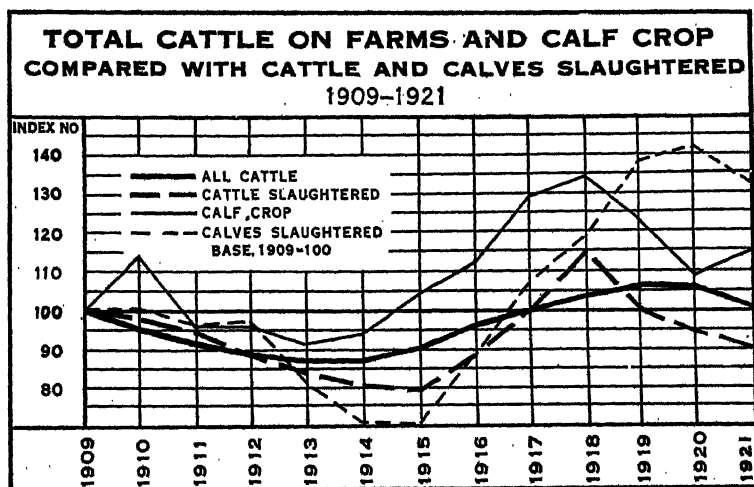


FIG. 75.—The trend of cattle production and slaughter was downward until 1914. The downward trend in production was checked by a larger calf crop in that year and by still larger calf crops from 1915 to 1918. In 1916 the slaughter increased and about two years later exceeded the calf crop. The calf crop began to decrease after 1918, but the number of calves slaughtered continued to increase until 1919. This resulted in a reduction of the number of cattle on farms after 1919. (See Fig. 76.)

the considerably higher prices for calves than for more mature cattle.

In other words the stagnant condition of the industry resulting from the termination of war-time consumption was relieved by the liquidation of the calves and light cattle for which the market demand and price were more favorable than for mature and heavy cattle. While the number of cattle has decreased the situation is not as serious as might appear, since the number of cattle is greater now than in any year from 1896 to 1917.

The tendency is to produce earlier maturing cattle which are ready for market at an earlier age. The proportionate slaughter of calves and yearlings is much greater than formerly. The greater proportion of beef cows, as shown in Table 12, makes it possible to produce and market a larger number of beef animals each year. If a sufficient number of them are fattened as yearlings instead of being slaughtered as calves, more beef can be produced than if fewer cattle were raised but kept to a greater age as formerly. Therefore, with

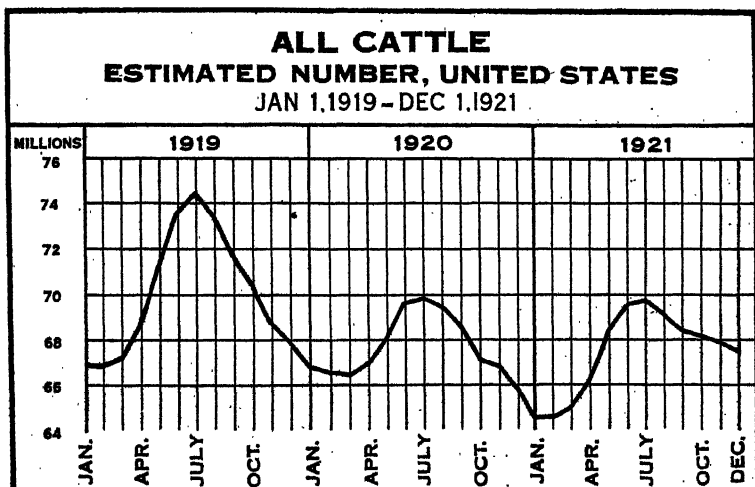


FIG. 76.—The spring calf crop increases the number of cattle, the annual maximum being reached usually in June or July (see Fig. 50). The number is then gradually reduced by slaughter, the annual minimum being reached in January or February (see Fig. 51). This indicates the consequences of taking the census at different times of the year. There was a considerable decrease in the number of cattle from 1919 to 1920, according to the estimates.

our present number of beef cattle and larger proportionate number of breeding cows, it is possible to produce more beef annually than the same number of beef cattle with a smaller proportion of cows would have produced when more steers were kept to a greater age. However, the system of using younger cattle for beef involves the use of more harvested feed per 100 pounds of beef produced, since a larger proportion of the gains in weight are made in the feed lot than was formerly the case when steers were carried four to five seasons on grass.

### Bulletins Relating to Beef Cattle.

The Department of Agriculture has available for distribution a number of bulletins which deal with breeds, breeding, feeding, care, management, diseases, insect pests, farm equipment, fitting for show, judging, cost of production, marketing, and other related subjects pertaining to the beef-cattle industry. These publications can be secured free in small numbers from the Division of Publications, Department of Agriculture, or may be purchased in quantity at 5 cents each from the Superintendent of Documents, Government Printing Office, Washington, D. C. A partial list of these bulletins is given as follows: 612. Breeds of Beef Cattle; 724. Feeding Grain Sorghum to Live Stock; 790. Contagious Abortion of Cattle; 1008. Saving Farm Labor by Harvesting Crops with Live Stock; 1057. Cattle Fever Ticks and Methods of Eradication; 1068. Judging Beef Cattle; 1095. Beet-top Silage and other By-Products of Sugar Beet; 1135. The Beef Calf: Its Growth and Development; 1167. Essentials in Animal Breeding; 1179. Feeding Cottonseed Products to Live Stock; 1218. Beef Production in the Corn Belt.

There are also available Department of Agriculture and Bureau of Animal Industry bulletins, which give the results of experiments and investigations dealing with beef cattle and beef production. They may be purchased at the indicated prices from the Superintendent of Documents, Government Printing Office, Washington, D. C., as follows: 25. Shrinkage in Weight of Beef Cattle in Transit, 10 cents; 73. Raising and Fattening Beef Calves in Alabama, 5 cents; 575. Stock Poisoning Plants of the Range, 50 cents; 580. Beef Production in the South, 5 cents; 588. Increased Cattle Production on Southwestern Ranges, 5 cents; 628. Wintering and Fattening Beef Cattle in North Carolina, 10 cents; 631. Five Years' Calf Feeding Work in Mississippi and Alabama, 10 cents; 777. Fattening Steers on Summer Pasture in the South, 5 cents; 790. Range Management on the National Forests, 35 cents; 827. The Out-Over Pine Lands of the South for Beef Cattle Production, 15 cents; 870. Effect of Winter Rations on Pasture Gains of Yearling Steers, 5 cents; 905. Principles of Live Stock Breeding, 15 cents; 954. Wintering and Summer Fattening of Steers in North Carolina, 5 cents; 1024. Feeding Experiments with Grade Beef Cows Raising Calves, 5 cents; 1042. Effects of Winter Rations on Pasture Gains of Calves, 5 cents; and Bureau of Animal Industry Bulletins 103, 131, and 147. Experiments in Beef Production in Alabama, 10 cents each; and Circular 166. Influence of Winter Rations on the Growth of Steers on Pasture, 5 cents.

Reports on the meat situation in the United States, cost of production and marketing of beef cattle, have been issued from the Office of the Secretary of the Department of Agriculture. These reports are no doubt available as references, and some of them may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., as follows: 109. Statistics of Live Stock, Meat Production and Consumption, Prices, and International Trade for Many Countries, 35 cents; 110. Live Stock Production in the Eleven Far Western Range States, 15 cents; 111. Methods and Cost of Growing Beef Cattle in the Corn Belt States, 15 cents; 112. Utilization and Efficiency of Available American Feedstuffs, 5 cents; 113. Methods and Cost of Marketing Live Stock and Meats, 25 cents.



By A. M. AGELASTO, *Specialist in Cotton Classing, Bureau of Agricultural Economics*; C. B. DOYLE, *Botanist, Bureau of Plant Industry*; G. S. MELOY, *Investigator in Cotton Marketing*; and O. C. STINE, *Agricultural Economist, Bureau of Agricultural Economics*.

### Cotton the Great Crop of the South.



**T**HE greatest commercial crop of the United States is cotton. The corn crop exceeds it in total value (Fig. 1), but much the greater part of that crop is consumed on the farms where grown, whereas all of the lint and most of the seed of the cotton crop is sold off the farms. In comparing crop values often only the value of the lint of the cotton is considered. The hay crops and the wheat crop are usually about equal to and sometimes greater in value than the lint of the cotton crop, but, including the value of the cotton seed, the cotton crop stands second only to corn. Although American mills consume about half the crop, the value of the exports of raw cotton usually exceeds that of the exports of any other crop.

Cotton is the great crop of the South. It is the chief and often almost the only source of income to a large proportion



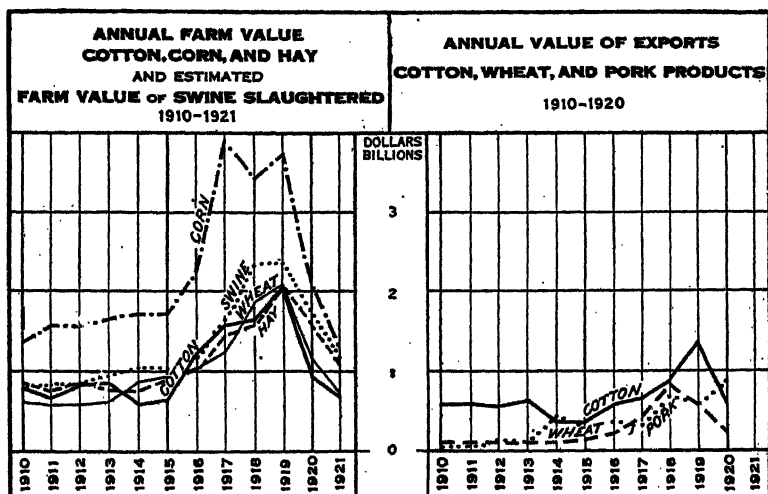


FIG. 1.—Note that cotton holds first place in exports but not in total value of the crop. Only the lint of the cotton is here included in the value of the crop. Adding the value of the seed, cotton would stand second to corn only in total value.

of the farmers in the Southern States. It is so important that low prices or any other factor which greatly reduces the profitableness of the crop greatly disturbs the economic life of the Southern States. When the cotton crop is good and brings good prices the South is prosperous.

There is a division of labor between the States of the North and those of the South by which the North depends upon the South for cotton clothing or the raw materials out of which to manufacture the clothing and for products of the cotton seed, and the South in turn buys many of the products of farms of the North. It follows, therefore, that when the South is prosperous it furnishes a good market for corn, flour, meat, and dairy products, and that a prosperous North makes a good demand for cotton and cotton products.

### World Production.

Such a large part of the cotton crop is marketed abroad that the prosperity of the South also depends to a considerable extent upon the conditions of the foreign markets for cotton. It is important, therefore, to consider the world's supply of and demand for cotton.

The United States has been for many years the world's greatest cotton producer. India, China, Egypt, and Brazil are the most important competitive producers. Many other countries produce small amounts of cotton. (See Figs. 2 and 3.)

#### India.

Some cotton is grown in nearly all parts of India, but most of it grows in the western half of the country. As in the United States, there is a high degree of specialization in cot-

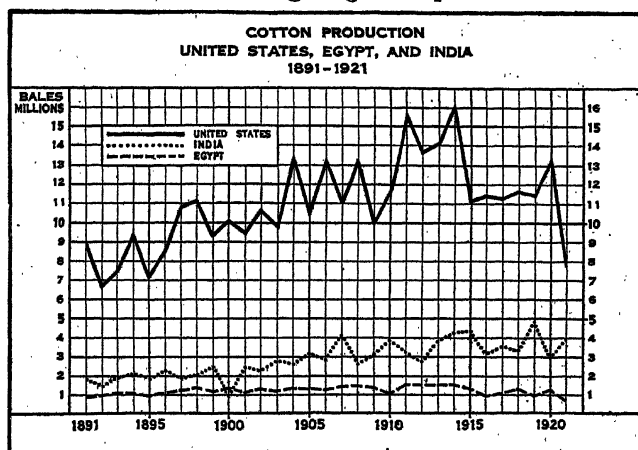


FIG. 2.—From 1891 to 1914 the cotton crops of Egypt, India, and the United States nearly doubled. The total crop of 1914 was the largest ever produced. Last year the crops in Egypt and the United States were the smallest in many years.

ton growing in some districts. The area devoted to cotton in India equals about two-thirds of the area planted in the United States, but the low yields per acre return a total crop about one-third as large. The production of India varies considerably from year to year, with a tendency to increase. The crop of 1919 was the largest yet produced. (See Fig. 2.)

#### Egypt.

The cultivable land in Egypt is limited to the Delta and a narrow strip along the Nile, of which nearly one-third is in cotton. The acreage is only about one-twentieth that of the United States, but large yields return a crop about one-tenth as large. The production of Egypt has declined since 1914 and in 1921 was the lowest in many years.

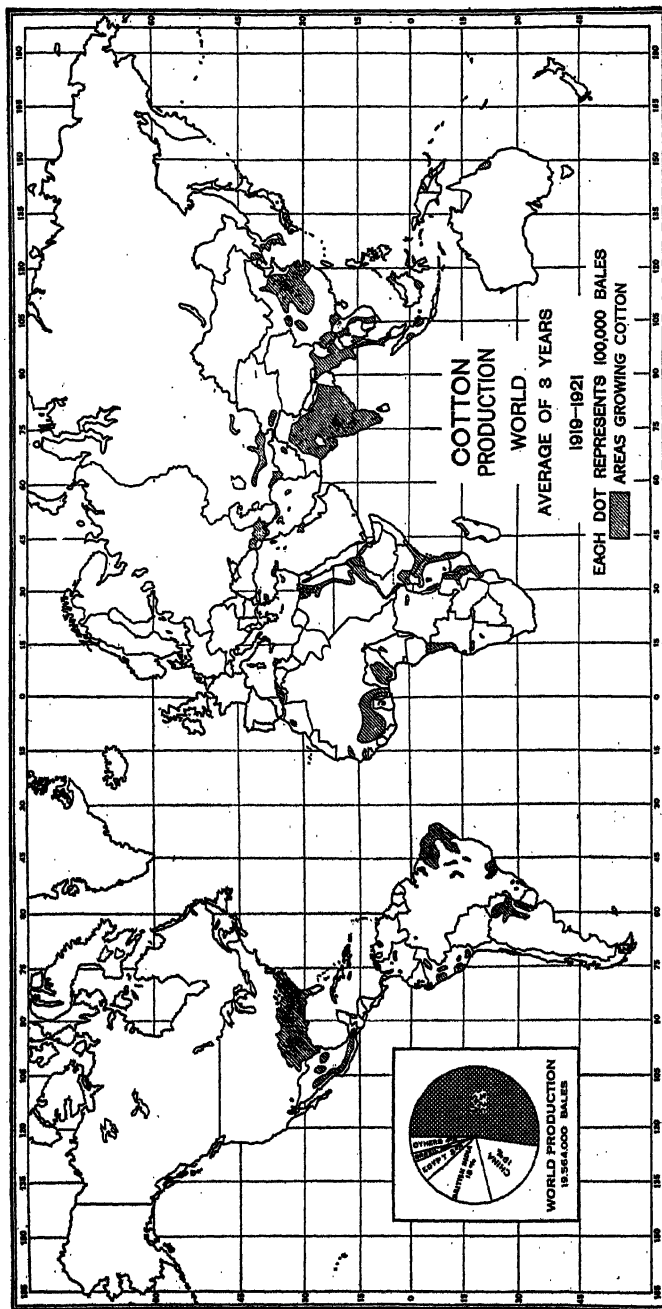


FIG. 3.—The United States produces over half of the world's cotton crop. The total crop of China is placed second by various estimates. In commercial production India is second. Cotton is grown in many parts of Africa and South America, but only in small quantities. Australia also grows a small quantity. Cotton requires a long season of warm weather for growth and proper maturity. Its latitudinal limits north and south fall between 35 and 45°, depending upon elevation and other conditions affecting the length of the frostless season.

## South America.

Cotton grows as far south in South America as the twenty-eighth parallel, which includes the northern part of Argentina. Within the zone in which the plant thrives the area suitable for growing it is limited. In a large part of the zone the altitude offsets the effects of latitude and tempers the tropical climate so much as to exclude this crop. In other parts the rainfall is too heavy. Very little cotton is found in the Tropics, where the annual rainfall amounts to more than 60 inches. The chief cotton-producing regions are the drier eastern sections of Brazil and the coastal zone of Peru.

Some authorities believe that Brazil has an extensive potential area for cotton production. Quite recently production has developed rapidly in Sao Paulo, southeastern Brazil. In this region cotton must compete with the growing of coffee. Likewise an increase has occurred in the production of Argentina in recent years, but the total production of Argentina is still rather small.

## China.

There are no authoritative statistics of production in China. Cotton production has developed rapidly in recent years, replacing the opium poppy in many regions. The known commercial crop exceeds 1 million bales. Since the domestic consumption is large, the total crop has been estimated to be about 4 million bales.

## Principal Commercial Types of Cotton.

Wild species of cotton (*Gossypium*) are found in tropical regions of both hemispheres, and there are hundreds of cultivated varieties, differing in plant characters, as well as in the length, strength, and fineness of fiber. Thirty-eight principal commercial types are recognized at Liverpool, the chief cotton market of the world. A broad grouping into five general classes according to uses and commercial values is as follows:

(1) Sea Island cotton (*Gossypium barbadense*) is a native of tropical America. It has yellow flowers with purple spots, bolls mostly 3-locked, black seeds, fuzzy only at the ends, and very long, silky fiber. "Fancy Sea Island," grown on the islands and mainland along the coast of South Carolina, has a fiber 2 inches long, sometimes

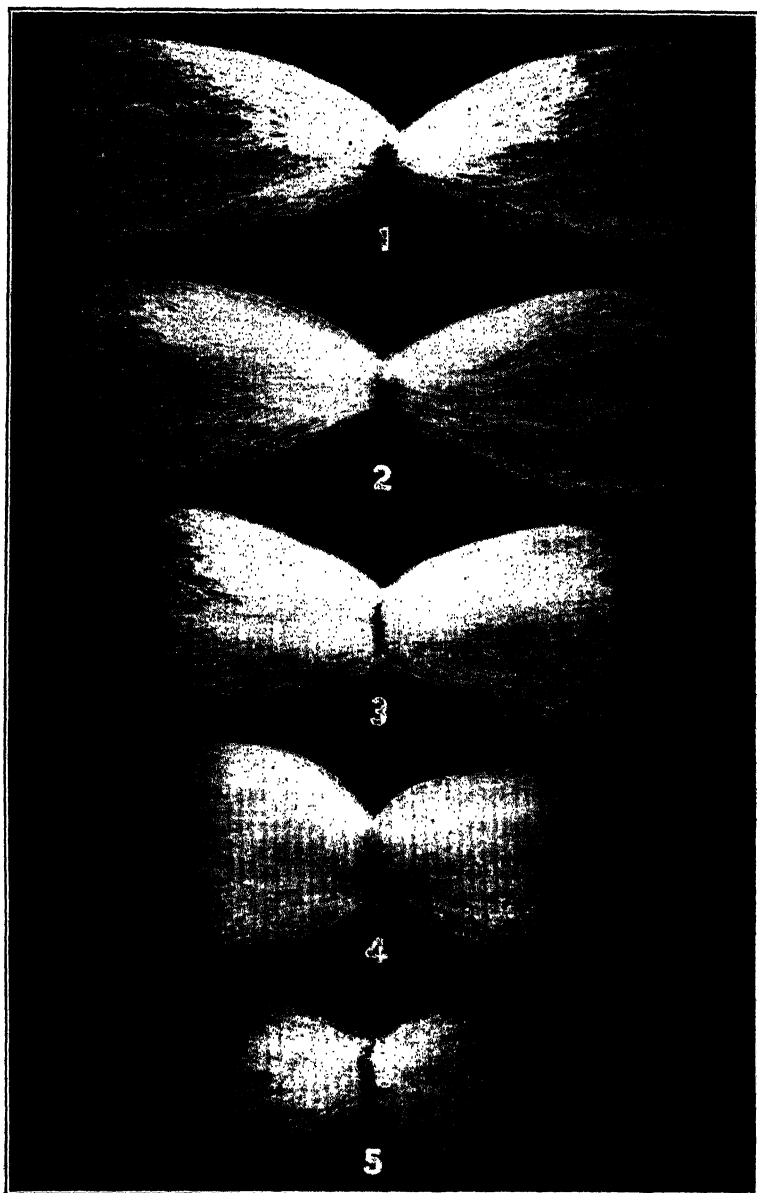


FIG. 4.—Principal commercial types of cotton. Combed lint of five important types: (1) Sea Island; (2) Egyptian; (3) upland long-staple; (4) upland short-staple; (5) Asiatic. (Natural size.)

even longer, and is the most valuable of the world's cottons, surpassing all other types in length, strength, and fineness. Most of the Sea Island crop, with a staple of  $1\frac{1}{2}$  to  $1\frac{3}{4}$  inches, is grown farther inland in Georgia and Florida and is known commercially as "Floridas" and "Georgias." Before the coming of the boll weevil the average yearly production of Sea Island cotton in the United States was about 90,000 running bales, of which the fancy grades represented about one-tenth. Since the invasion of the boll weevil the production of Sea Island cotton has rapidly declined, and in the last few years the crop of the United States has been a failure. In 1920 production practically ceased, the crop amounting to less than 2,000 bales, whereas in 1916 the production was about 116,000 bales. The remainder of the Sea Island crop of the world, probably amounting to 10,000 bales, is produced mostly in the West Indies, principally St. Vincent, Barbados, and St. Kitts, and in Peru. (See staple No. 1, Fig. 4.)

(2) Egyptian cotton (*Gossypium barbadense*) is similar to Sea Island in the general appearance of the plants, and has a fine, silky, strong fiber. The staple is from  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches long, and is second in value only to the Sea Island. Egypt furnishes the bulk of the annual crop, averaging about 1,250,000 bales of 500 pounds each, of which from 150,000 to 350,000 bales have been exported to the United States. Egyptian cotton is also produced in the irrigated valleys of Arizona and California, the first commercial planting being made in 1912, although it was experimentally grown in this country many years before that time. The American industry has rapidly grown from a production of 7,000 bales in 1916 in the Salt River Valley of Arizona to a total in both Arizona and California of about 100,000 bales in 1920. (See staple No. 2, Fig. 4.)

(3) Upland long-staple cotton (*Gossypium hirsutum*), grown chiefly in the United States, occupies a commercial position between the Egyptian and the Upland short staples. The plants resemble those of the short-staple type, having unspotted white flowers, bolls 4 or 5-locked, and seeds usually well covered with white, brown, or green fuzz, in addition to the lint. The staple ranges in length from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  inches, and for some purposes competes with Egyptian. Most of the Upland long-staple crop of the United States is produced in the delta lands of Mississippi, in the Pecos and Red River Valleys of Texas, in Oklahoma, Arkansas, California, and South Carolina. The annual production is about 1,500,000 bales. (See staple No. 3, Fig. 4.)

(4) Upland short-staple (*Gossypium hirsutum*) constitutes about 92 per cent of the cotton crop of the United States and about 50 per cent of the world's crop of 20,000,000 bales. "American Middling," the standard short-staple grade, is the basis of price quotations for all short-staple cottons. The staple varies in length from five-eighths to 1 inch, with some varieties exceeding an inch when grown under the most favorable conditions. Hundreds of varieties are cultivated in the American Cotton Belt, differing in habits of growth, size of bolls, earliness of opening, abundance, length, and uniformity of staple. American Upland varieties have been introduced into

Russian Turkestan and Transcaucasia, and now constitute the major portion of the crop in those regions. They are also being grown in India, China, Chosen, Africa, Asia Minor, and Brazil. (See staple No. 4, Fig. 4.)

(5) Asiatic cottons include *Gossypium herbaceum* and several related botanical species, *indicum*, *neglectum*, and *arboreum*. The staple is short, often only three-eighths to three-fourths of an inch, but strong and rather rough. Asiatic cotton is grown in India, China, Asia Minor, Persia, Indo-China, and Japan, but in several districts is giving place to the American Upland type. The total volume of the crop is large but unknown, most of it being applied to domestic or local uses. (See staple No. 5, Fig. 4.)

### Shifts in Cotton Production.

In the development of the United States the cotton crop has moved across the Cotton Belt from east to west. Areas have been tried out north of the areas in which cotton is now grown. Practically all possible available area for production in the United States has had a trial. Within the limits of suitable climatic conditions, production expands or contracts with changes in prices or in the profitableness of growing the crop. Shifts and changes in the distribution of the crop from 1839 to date are shown by Figures 5 to 9, inclusive.

In 1839 the cotton crop occupied only about half the area that it now occupies. Texas and the Indian territory west of Arkansas were not producing cotton. East of Texas all of the territory of the Cotton Belt had been opened to occupation by cotton planters and was being rapidly developed. The addition of large areas of new land that was well suited to the cultivation of cotton increased production so rapidly in the decade 1839-1849 that prices fell to a very low point. Notwithstanding low prices, production increased 50 per cent. Prices were better during the decade 1849-1859, and production continued to increase in all parts of the Cotton Belt, the greatest gains being made in the Southwestern States. In this decade Texas and Arkansas began to contribute to the annual crops of the United States. In this and the preceding decade, railroads were constructed from the coast to the interior in North Carolina, South Carolina, Georgia, and Alabama, increasing the transportation facilities and thereby encouraging the further development of cotton production in the interior of these States.

The blockade during the Civil War temporarily ruined the cotton industry of the South. During the war some cotton

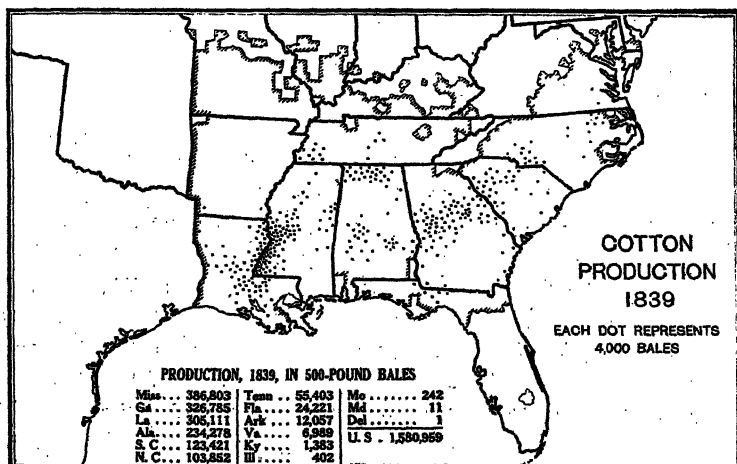


FIG. 5.—More than three-fourths of the cotton crop of 1839 was grown east of the Mississippi River. Mississippi was the leading State and Georgia next. Several counties in Illinois and Missouri reported cotton.

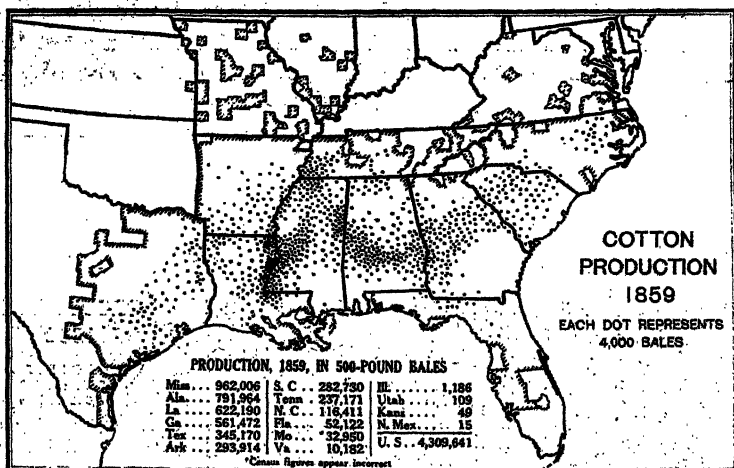


FIG. 6.—There was a great shift in area and a great increase in production between 1839 and 1859. The black prairie of Alabama and Mississippi and the alluvial lands along the Mississippi contributed largely to the increase in production. New territory was added in eastern Texas.

was produced, but for the most part agricultural activities were diverted to the production of food. In 1865 the South



was again free to return to a high degree of specialization in cotton. The recovery of production was necessarily slow.

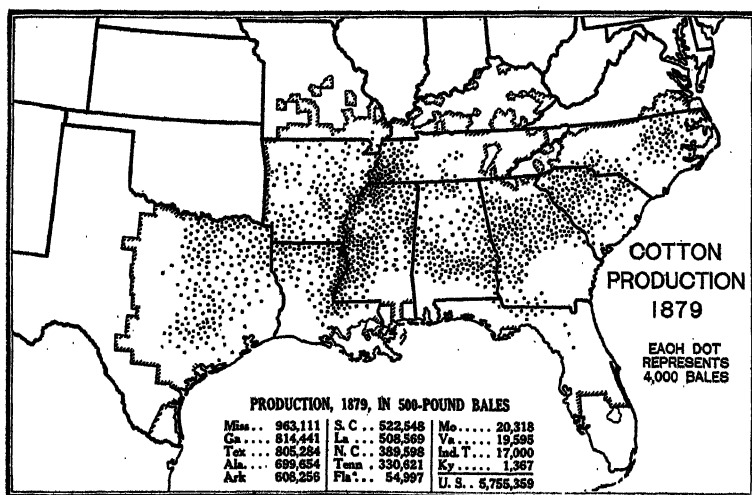


FIG. 7.—By 1879 production had practically recovered from the effects of the Civil War. It had shifted farther westward in Texas and Indian Territory. In the East the effects of the use of fertilizers on the upper Coastal Plain and Piedmont began to show in increased production.

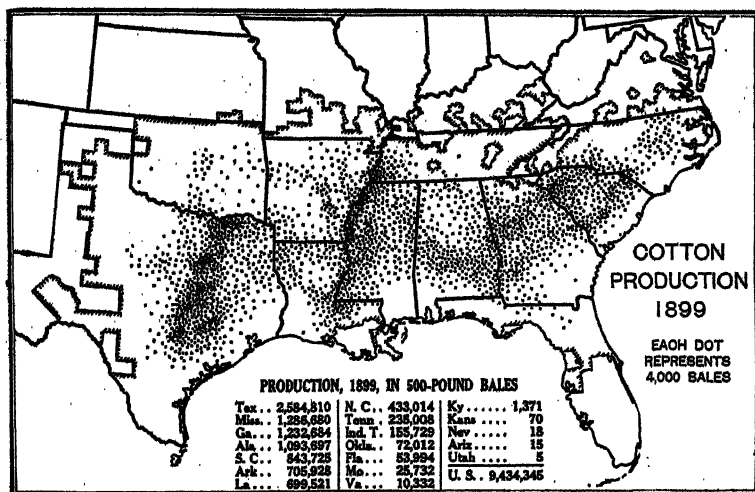


FIG. 8.—Texas trebled her crop between 1879 and 1899. In the East production continued to increase with the use of more fertilizer. At this date the boll weevil had begun to operate in Texas but had covered very little ground. (See Fig. 23.)

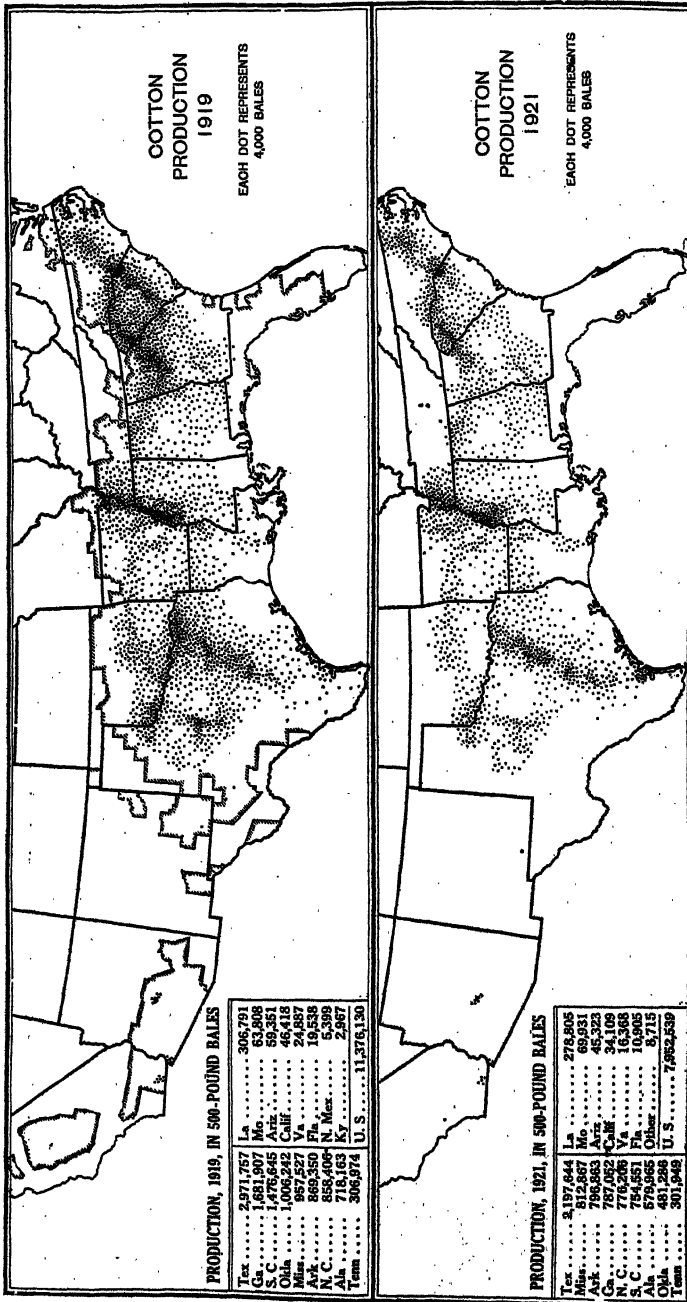


FIG. 9.—The upper part of this figure was made from census returns for 1919, the lower part from ginners' reports for 1921. The differences in the States east of New Mexico between 1899 and 1919 are largely owing to the activities of the boll weevil, which is more destructive in the southern parts of the Cotton Belt than in the northern parts. The lower map shows what parts of the Cotton Belt lost most heavily last year.

The crop of 1866 was less than 2 million bales, which was less than half that of 1859 and a little greater than the crop of 1839. High prices stimulated production by the farmers along the northern border of the Cotton Belt and in Arkansas and Texas. It was not so difficult to reorganize agricultural activities where the farms were small and worked largely by white labor as it was to reorganize the large plantations which had been worked by slave labor. By 1879 conditions in the South were fairly stable again, and the crop of that year was the largest that had ever been produced. All the States, except Alabama and Louisiana, produced more cotton in 1879 than in 1859.

Production doubled between 1879 and 1898. In the West the increase in production was largely from new lands. The expansion of railroads in Texas was followed by the rapid development of cotton production in the Black Waxy Prairie region, grazing and grain farming giving way to cotton. Production in Arkansas and Oklahoma had also increased greatly. In the East there was an increase in production, largely as the result of the extensive use of fertilizer on sandy soils and of improvements in methods of production.

The development of Oklahoma and western Texas added a large acreage to the cotton-producing area between 1899 and 1909. The total acreage increased 32 per cent in the decade and continued to increase up to 1914. This period is marked by the spread of the boll weevil, by the intensification of efforts to produce higher yields and better qualities, by the introduction of cotton into the irrigated districts of southern California and Arizona, by the great increase in the value of cotton seed, by the rapid development of cotton manufacturing in the South, and by increased competition from foreign countries.

Since 1914 production of cotton has been reduced considerably by the ravages of the boll weevil. The crop of 1919 was only a little larger than the crop of 1909, which was a short crop for that period. The crop of 1921 was greatly reduced by the boll weevil and was the shortest crop that has been produced since 1895. It may be noted that the heaviest reductions were made in the regions most recently infested by the boll weevil. (Compare Figs. 9 and 23.)

# COTTON

## ACREAGE, YIELD PER ACRE AND PRODUCTION

### UNITED STATES, 1866-1921

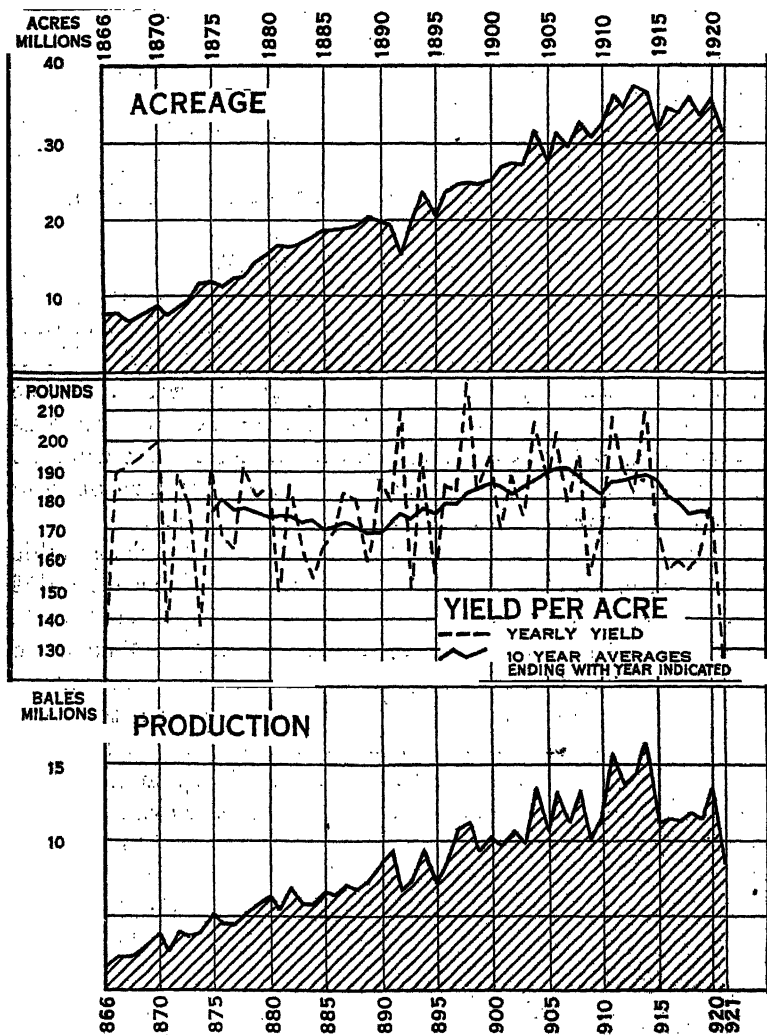


FIG. 10.—The acreage of cotton expanded rapidly from 1866 to 1913. The trend since 1913 has been downward. The yield per acre varies greatly from year to year, the trend was upward from 1890 to 1907 and has been downward since the latter date, and last year was the lowest recorded. The crop of last year was the smallest since 1895.

### **Acreage, Yield, and Production.**

Beginning with the earliest date for which acreage data are available, the area of cotton harvested has quadrupled. The very rapid increase from 1866 to 1880 was a process of recovering after the Civil War. The rapid expansion from 1893 to 1911 was for the most part an expansion westward in Texas and Oklahoma. In recent years a tendency seems to be developing to maintain a level or possibly to reduce the area in cotton. The ravages of the boll weevil have caused reductions in acreage in the worst infested areas. These reductions have been offset by expansion of cultivated areas in which the weevil has been less destructive.

Yields per acre fluctuate greatly from year to year. The average for 1921 was the lowest of which there is a record. The trend of yields was downward to 1890, after which it was upward for 16 years, and is again downward. Three major factors in the trend of yields are shifts in area, fertilizers, and boll weevil. The downward trend in the first period noted was due largely to expanding low-yielding areas, the upward tendency, developed later, was due largely to increased use of fertilizers in some States, and the later downward tendency is caused primarily by the activities of the boll weevil.

Production fluctuates with yields and follows a composite trend between acreage and yield. Unusually large areas planted from 1910 to 1914 and good yields produced very large crops, the crop of 1914 being the largest ever produced. Since 1914 the crops have averaged about the same as for the period 1904-1909, and last year's crop was the smallest produced since 1895.

### **Diversification of Crops in the South.**

The averages of crops in the South as reported by the censuses of 1880-1921, inclusive, show no decided tendency toward diversification until the last decade. Several new crops have come into the South in this period and now occupy considerable areas. The area sown to rice has increased over 50 per cent but is still a small percentage of the total cultivated area. In recent years peanut growing has developed some importance. Soy beans and cowpeas are comparatively

new crops in the South. Kafir and milo are new crops in Oklahoma and Texas. The total acreage of all these new crops compared with the total acreage of cotton or corn is not very great, but together with all other crops they now make up about one-third of the total crop area.

*Changes in acreages of selected crops in the cotton-growing States, 1879-1919.*

|                                 | Number of acres,<br>000 omitted. |       |       |       |       | Per cent of total acreage of principal<br>crops. |       |       |       |       |
|---------------------------------|----------------------------------|-------|-------|-------|-------|--|-------|-------|-------|-------|
|                                 | 1919                             | 1909  | 1899  | 1889  | 1879  | 1919   | 1909  | 1899  | 1889  | 1879  |
| Rice.....                       | 779                              | 610   | 342   | 161   | 174   | 0.8  | 0.7   | 0.5   | 0.3   | 0.4   |
| Kafir, milo,<br>maize, etc..... | 2,635                            | 1,108 | 86    | ..... | ..... | 2.7  | 1.4   | .1    | ..... | ..... |
| Hay—tame or<br>wild grasses.... | 4,360                            | 3,518 | 1,950 | 1,543 | 454   | 4.5  | 4.4   | 3.0   | 3.2   | 1.1   |
| Annuallegumes—<br>hay.....      | 1,339                            | ..... | ..... | ..... | ..... | 1.4  | ..... | ..... | ..... | ..... |
| Sorghum kafir—<br>forage.....   | 2,566                            | 1,148 | 749   | ..... | ..... | 2.7  | 1.4   | 1.1   | ..... | ..... |
| Peanuts.....                    | 913                              | 724   | 398   | 143   | ..... | .9   | .9    | .6    | .3    | ..... |
| Total.....                      | 12,592                           | 7,108 | 3,525 | 1,847 | 628   | 13.1   | 8.8   | 5.3   | 3.9   | 1.6   |

Locally marked changes have taken place in the relative acreages of the different crops. The destructive activities of the boll weevil have been an important factor in bringing about these changes. The acreage of cotton in Georgia in 1919 was considerably below the acreage of 1909. The reduction in cotton acreage here was offset largely by an increase in the acreage of corn. There was a considerable increase in the acreage of hay, especially

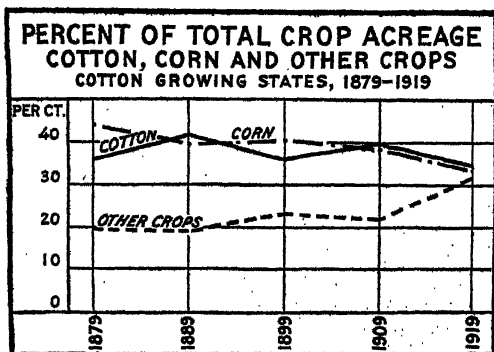


FIG. 11.—From 1909 to 1919 the percentage of land cultivated in crops other than corn and cotton in the Southern States increased considerably.

legume hay, otherwise there were no very significant changes. Similar but even more striking changes have taken place in Mississippi. In a few States cotton has increased in importance, offsetting, in a measure, the decline in the relative importance of cotton in the States which have been seriously affected by the boll weevil.

In the last year, 1921, there seemed to be every reason for reducing the acreage planted to cotton and increasing the acreage planted to corn. According to the latest estimate,

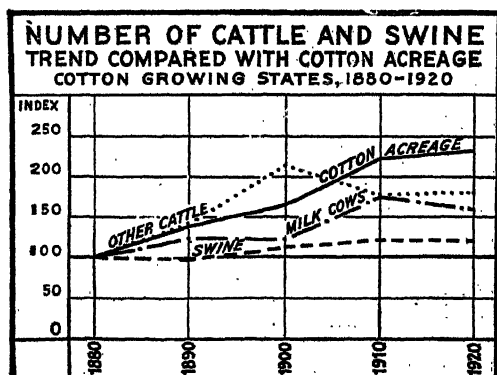


FIG. 12.—Census returns of live stock are not strictly comparable from date to date. The figures available indicate that live stock has not increased as rapidly as the acreage of cotton.

the result was a reduction of the cotton crop for 1921 to approximately the acreage for 1915, a total reduction from 1920 of about 10 per cent. The high freight rates on corn from the North encouraged the increase in corn production. For a long time we have had this

swinging from corn to cotton and from cotton to corn, maintaining a relation of about 50 to 50 between them.

The number of live stock in the cotton-producing States has increased in the last 50 years, but not as rapidly as has the area planted to cotton. The number of cattle doubled and the number of swine increased about 25 per cent. The increase in live stock is supported by the increase in tame grass and legume hay. It is difficult to compare exactly the last two censuses. The change in number between the last two decades seems disappointing to one who believes that the South would profit by keeping more live stock.

### The Cotton Belt.

The term "Cotton Belt" as it is generally used applies to that area of specialized cotton production in the South extending from the Atlantic coast through North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi,

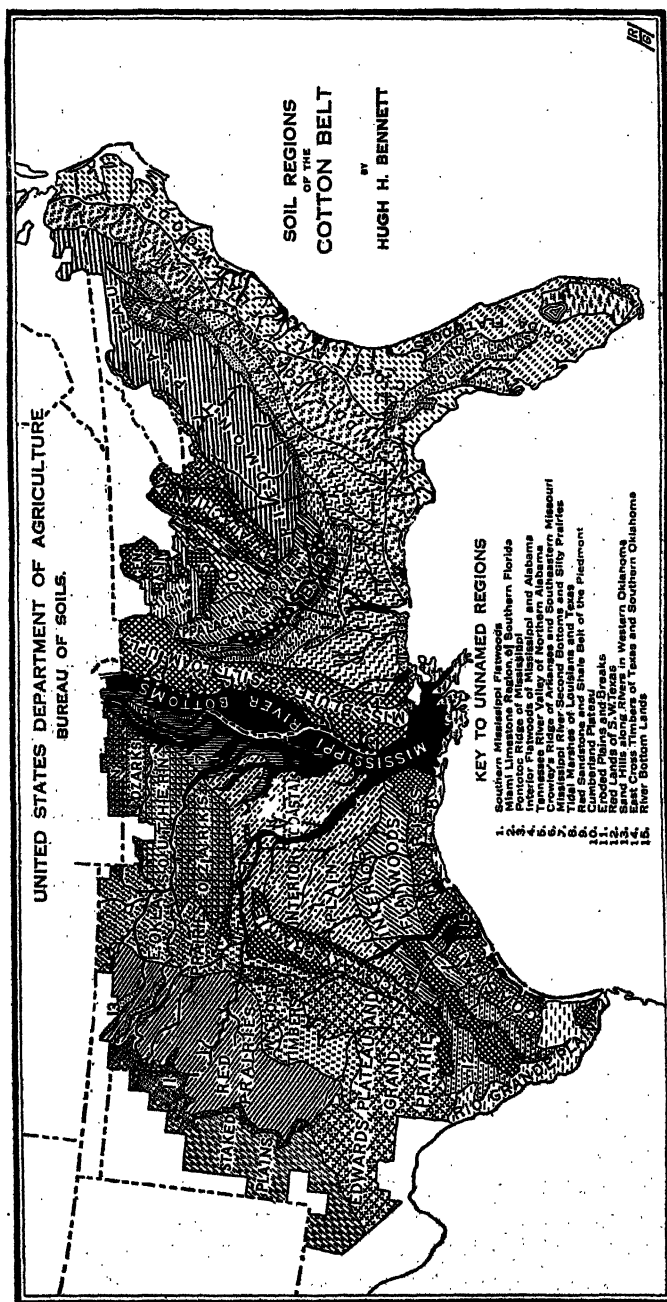


FIG. 13.—Excepting in southern Florida, only cotton-growing counties of some importance are included. Compare Figures 13 and 9 and note the distribution of cotton production in relation to soils. The most productive soils are the bottoms of the Mississippi and tributary rivers, the black prairies of Alabama, Mississippi, and Texas. Fertilizer makes the upper Coastal Plain and the Piedmont Plateau of Atlantic Coast States very productive.



Arkansas, western Tennessee, and northern Louisiana, and into Texas and Oklahoma. The densest production of cotton is found on the soils most suitable for its production in the center of this belt. (Figs. 9 and 13.) Both soil and climate are very important factors in the determination of areas suitable for cotton production.

About two-thirds of the Cotton Belt consists of a broad coastal plain, composed principally of sedimentary materials, bordering and largely derived from two ancient and much-eroded mountain masses, the Appalachian Highlands (including the Piedmont) in the east and the Ozark Highlands in the west. From these highland areas rivers radiate across the coastal plain, bordered, especially along their lower courses, by swampy flood plains often several miles wide; and in the broad depression between these two highlands the Mississippi River flows southward, dividing the Cotton Belt into an eastern and western section approximately equal in area, in acreage of improved land, and in production of cotton. Beyond the boundary of the coastal plain the Cotton Belt includes northern and western marginal regions, comprising a portion of the Piedmont Plateau and of the valleys associated with the Cumberland Plateau and Blue Ridge Mountains in the east, together with the valleys of the southern Ozarks (Ouachita and Boston Mountains) and a portion of the prairies and great plains of Texas and Oklahoma in the west.

#### Soils of the Cotton Belt.

Cotton is grown on practically all well-drained types of soil in the Cotton Belt, but a comparison of the map showing distribution of production with the map showing soils brings out the fact that certain types of soil seem to be much more suitable for cotton production than other types. (See Figs. 9, 13.) The most productive soils in a normal season are the dark-colored clay lands, particularly those rich in lime, such as the black prairies of Alabama, Mississippi, and Texas, and the red, brown, and black well-drained river bottom land and the second bottoms such as are found in the Mississippi, Tennessee, and Arkansas. The sandy loams of the Coastal Plain and the red subsoil Piedmont lands, when fertilized, also give high yields of cotton. The use of fertilizer permits the growing of cotton on light sandy land which would other-

wise give yields too low to be profitable. The red prairie of Texas and Oklahoma east Oklahoma prairie and that part of the Grand Prairie and Edwards Plateau of Texas are also productive soils, but in western Oklahoma and Texas the yields of the crops are frequently reduced by drought. (For detailed description of the soils shown on the map on page 339, see *Atlas of American Agriculture*, cotton section.)

#### Climate of the Cotton Belt.<sup>1</sup>

Although the most noticeable differences in the density of cotton acreage and variations in yield per acre within the Cotton Belt are due principally to soil conditions, the outer boundaries of cotton production are determined almost entirely by climatic factors. The Cotton Belt has an average summer temperature of 77 degrees along the northern boundary. This temperature appears to be the limit, beyond which commercial production becomes unprofitable. In the southern portion of the Cotton Belt the summer temperature is 80 to 85 degrees. Along the northern margin of the Cotton Belt the last killing frost in spring occurs on an average about April 10, and the first killing frost in fall about October 25, so that the frostless season is about 200 days. In the southern portion of the Cotton Belt the last killing frost in spring occurs about March 10 on the average, and the first killing frost in fall seldom before November 25, the frostless season being 260 days or more in length.

The average annual precipitation in the Cotton Belt ranges from 23 inches in western Oklahoma and Texas to 55 inches in eastern North Carolina and 60 inches in southern Mississippi, but throughout much of the belt is between 30 and 50 inches. The spring rainfall ranges from 6 inches in western Texas to 16 inches in Arkansas and southern Mississippi, being heavier in the Mississippi Valley States than in Texas or the South Atlantic States. The summer rainfall is somewhat greater than that of the other seasons, especially in the southern and eastern portion of the belt, reaching a maximum of 20 inches in southern Mississippi and in eastern North and South Carolina, while in the black prairie region of central Texas the amount received averages only 8 inches. Autumn is the driest season of the year, practically all the

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<sup>1</sup> Taken from the "Cotton" section of the *Atlas of American Agriculture*, page 9.

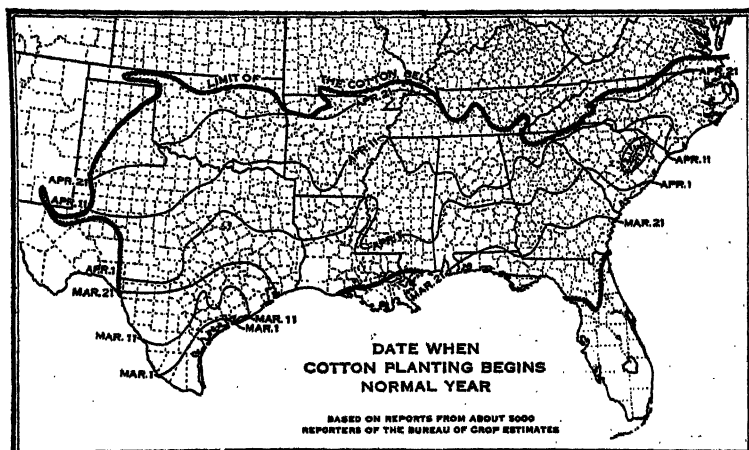


FIG. 14.—In southern Texas planting begins about March 1, and the date becomes later going north to the northern border of the Cotton Belt, where it begins about April 21. The planting of cotton begins generally about 10 to 20 days after the last killing frost in spring.

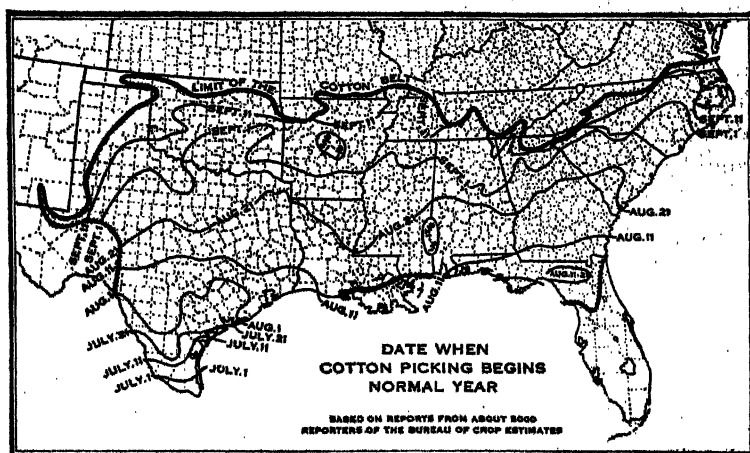


FIG. 15.—Cotton picking begins early in July in southern Texas. Through the center of the Cotton Belt it begins in the latter part of August and along the northern border not until about September 11. The southern part of the Cotton Belt has a long picking season, but along the northern border the cotton must be picked as early as possible to escape the frost.

important cotton regions receiving less than 10 inches of rain during the fall months. February and November are the wettest months in the Mississippi Valley States, in Alabama, and in northern Georgia. August is the wettest month in the Carolinas and May in Texas and Oklahoma. October and November are the driest months throughout practically the entire Cotton Belt.

#### Crop Combinations in the Cotton Belt.

The high degree of specialization in cotton production in the Cotton Belt is in part explained by three things: First, the world demand for cotton is great, and the areas having especially favorable climate and other conditions are restricted. Second, cotton provides rather steady employment for labor from early in the spring to a little beyond the middle of the summer and from early fall to early winter. In fact, it provides so fully for the employment of labor throughout the season that a cotton farmer usually chooses his other crops more with a view to making the business and home partly self-sufficing than he does with a view to providing profitable employment for labor at times when cotton does not require attention. (See Fig. 18, seasonal distribution of labor.) Third, cotton is marketed direct—that is, it is not disposed of through live stock. If it were a crop to be fed, a farmer would in all probability need to give more attention than he does to the production of other crops which would be supplementary from the standpoint of caring for live stock. As it is, he produces forage and grain crops mainly for a few head of work stock. Considering these things, it is not surprising that cotton farmers are not inclined to produce more corn, sorghum, oats, cowpeas, peanuts, sweet potatoes, etc., than they themselves can make good use of in the course of producing and marketing cotton.

The accompanying map (Fig. 16) shows the Cotton Belt divided north and south and east and west on the basis of certain differences in the choice of crops grown with cotton. The line drawn north and south through Oklahoma and Texas indicates where corn begins rather definitely to give way to kafir and other grain sorghums. But for the dryness of the climate to the west of this line, corn would hold its place on cotton farms throughout the Cotton Belt.

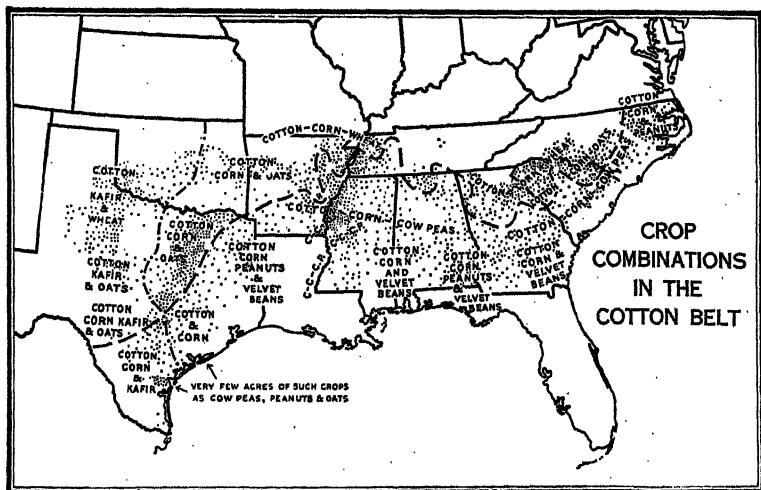


FIG. 16.—North of the line drawn through the Cotton Belt from Virginia on the east down through the Southern States and extending to the Mexican border on the west wheat and other small grains appear in the cropping system. South of this line small grains do not appear, their place being taken by leguminous crops. Another line drawn from the Kansas border across Oklahoma and Texas separates the kafir-producing area from the corn-producing area.

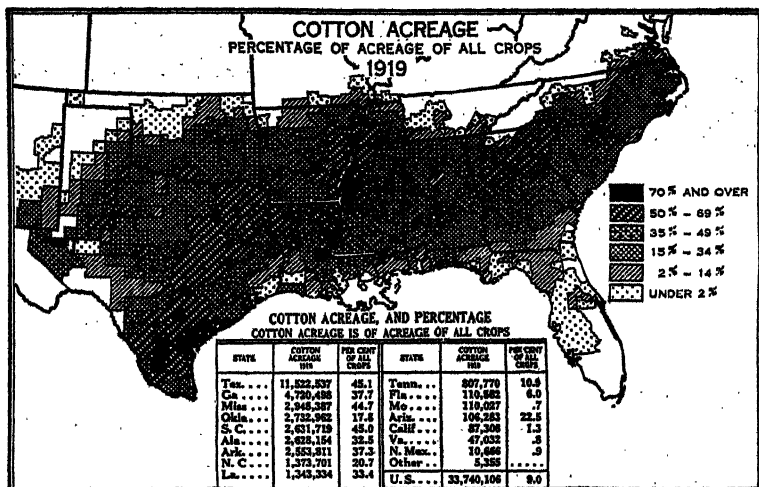


FIG. 17.—Considering State totals, the greatest specialization in cotton is in Texas, with South Carolina second and Mississippi third. In several areas over 70 per cent of all the land in crops is in cotton. The largest area of this kind is along the Mississippi River in Mississippi and Arkansas.

North of the line running east and west through the Cotton Belt the acreage of small grains (wheat, rye, etc.) exceeds the acreage of large-seeded annual legumes (cowpeas, peanuts, velvet beans, etc.). South of the line the acreage of large-seeded annual legumes exceeds the acreage of small grains. The choice of the small grains in the northern division of the Cotton Belt tends to be wheat to the north and oats to the south. The oats are sown in the autumn instead of the spring as in the North. In the southern division of the belt, where crops like cowpeas, peanuts, and velvet beans are more

# SEASONAL DISTRIBUTION OF MAN LABOR ON CROPS 5 COUNTIES IN CENTRAL ALABAMA

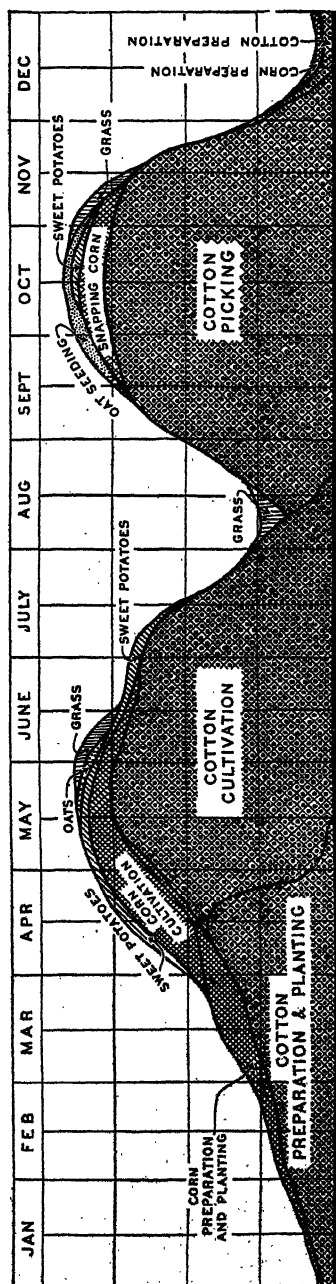


FIG. 18.—The periods of slack work come in midsummer—July and August—and in midwinter—December and January. No crops are grown on which labor can be utilized during these periods of slack work. Of course, in the farthest South winter vegetables can be grown in the slack winter period. Some grass harvest comes in August, but it is not important. The picking season is the limiting period for labor on cotton. At the same time corn should be snapped, oats should be seeded, sweet potatoes dug, and grass harvested. It is not surprising, therefore, that where cotton is a very profitable crop these other crops may not receive much attention.

important, oats are practically the only small grain grown. This lower part of the Cotton Belt lies almost wholly within the Coastal Plain, where climatic conditions generally are less favorable to the production of small grains than they are farther north.

The choice of the large-seeded annual legumes in the southern division of the Cotton Belt tends to be cowpeas in the Mississippi River bottoms and to the east along the upper part of the Coastal Plains, peanuts and velvet beans elsewhere between eastern Texas and southeastern Georgia, and peanuts alone in northeastern North Carolina and southeastern Virginia. The share of land allotted to these crops in the Coastal Plains of southern Texas is almost negligible. In the northern division of the Cotton Belt, where the small grains are more important, a little land is allotted to cowpeas and peanuts, but very little to velvet beans.

#### General Farm Practices.

Time and method of preparing land, of planting, cultivating, picking the cotton, and the cost of preparing it for market vary much in different parts of the South. Probably in most cases the causes of the differences are not to be found only in the different customs; there are also physical and economic reasons for the differences.



FIG. 10.—One mule plow in Southeast.

Wherever crab grass, Johnson grass, and other weeds grow profusely in the fields the cultivation of cotton requires from one to three hoeings per season. With one mule a man can plow, chop, and hoe from 10 to 20 acres, from which 5 to 10 bales of cotton are produced, and this is ordinarily all one family can pick. Therefore, one-mule implements are used over the greater portion of the eastern part of the Cotton Belt. In some sections the topography of the land would make the use of larger implements difficult. In the level, black lands of Texas, however, where,



FIG. 20.—Two-mule plow in Texas.

owing to the smaller amount or absence of crab grass, the hoe work is comparatively small and where transient labor can be obtained to pick the cotton, 4-mule implements are frequently used in preparing the land and 2-mule implements in cultivating it.

The newest form of cotton cultivation in the United States has developed in the irrigated districts of the Southwest. Here the essentially distinctive features are leveling the land so that the entire field may be irrigated uni-



formly and regulating the water so as to produce the desired results in producing the cotton. Another special kind of culture is used in producing the sea-island cotton of South Carolina and Georgia.

### Fertilizers.

Commercial fertilizers are extensively used in the production of cotton in the Southeastern States. (See Fig. 21.) Comparing Figure 21 with Figure 13, the heaviest use of fertilizers is seen to be on the soils of the Coastal Plains of

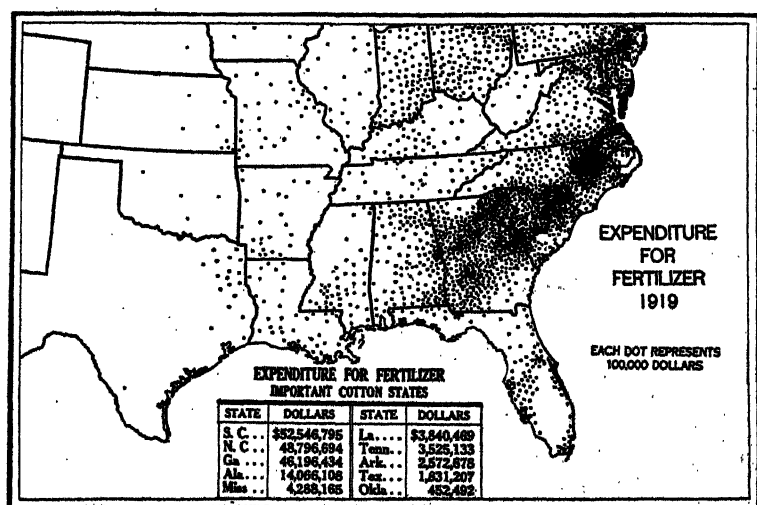


FIG. 21.—Distribution of the expenditure for fertilizers as reported by the census of 1919. The heaviest use of fertilizers is on the Coastal Plain and Piedmont of the Carolinas and Georgia. Very little is used west of Alabama. Compare the distribution of expenditures for fertilizers with distribution of cotton production (Fig. 9).

North Carolina, South Carolina, and Georgia, and also to a considerable extent upon the soils of the Piedmont of these States.

The fertilizers most generally used consist of acid phosphate, kainit, muriate of potash, and nitrate of soda. In many regions the greatest outlay of cash in producing the crop is for the fertilizers. After labor, it is the most important factor in the cost of producing cotton in these Eastern States.

**Cotton Pests.****The Boll Weevil.**

The original home of the boll weevil appears to be the plateau region of Mexico or Central America. Previous to 1892 the insect had spread through much of Mexico. Little is known, however, concerning the extent or rapidity of dispersion. About 1892 the weevil crossed the Rio Grande near Brownsville, Tex. Whether it flew across or was transported in some way is not known. By 1894 it had spread to

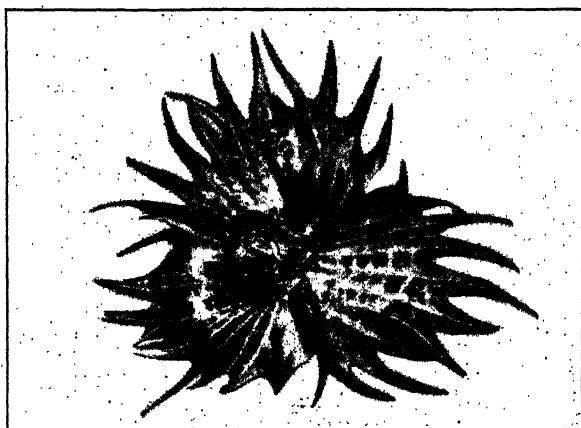


FIG. 22.—Cotton boll weevil. Puncturing young flower bud. (Natural size.)

half a dozen counties in southern Texas. Since 1894 it has extended its range annually from 40 to 160 miles, although in several instances the winter conditions have been such as to cause a decrease in the infested area. (See Fig. 23.)

Outside of the United States the boll weevil is known to occur throughout the larger portion of Mexico and southward to Guatemala and Costa Rica. It is known to occur also in the eastern half of Cuba.

In the newly invaded region of the Cotton Belt the loss from boll-weevil damage may run as high as 50 per cent or more of the crop and invariably creates a condition bordering on panic among cotton planters. Under such conditions diversified farming and animal husbandry receive a powerful impetus. As time passes, however, and the planters learn the proper methods of raising cotton under boll-weevil con-

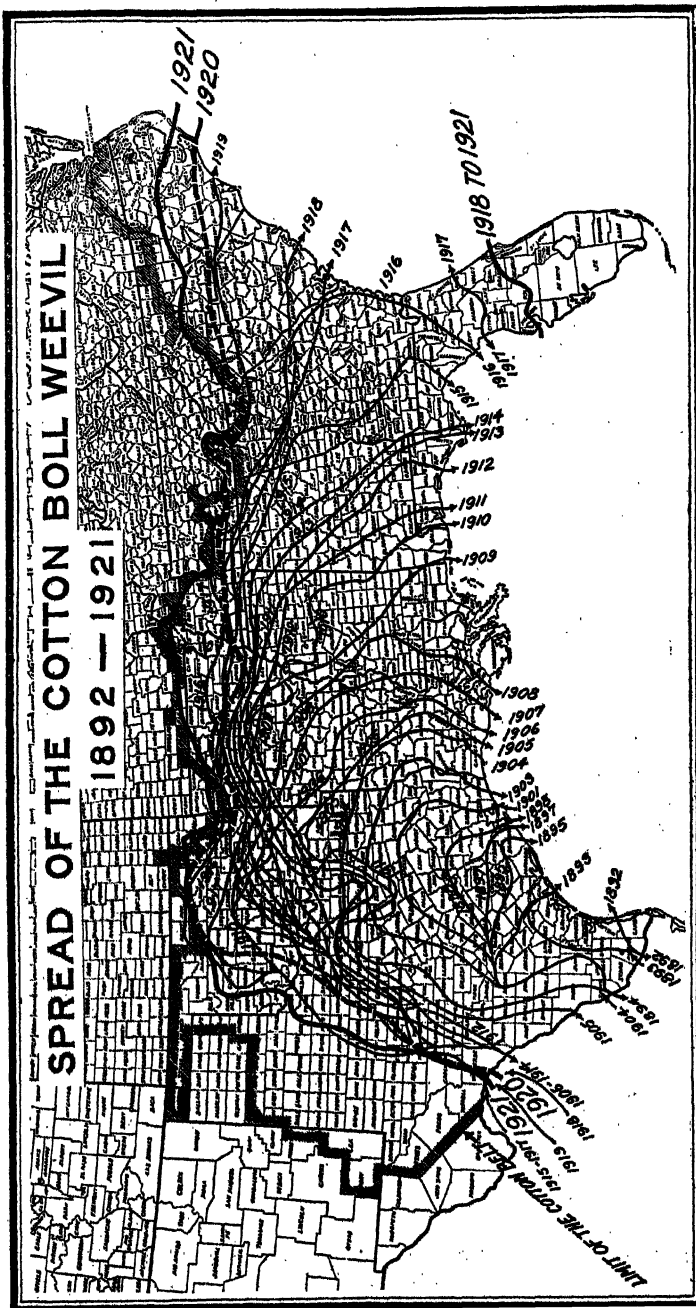


FIG. 23.—In 1892 the boll weevil crossed the Rio Grande from Mexico and occupied an insignificant area in the extreme southern tip of Texas. Note this area, indicated by the short line and the figures 1892. The map shows the subsequent spread of the weevil year by year.

ditions, a considerable reduction of the loss incident to the presence of the weevil is apparent.

The actual damage done by the boll weevil varies greatly from year to year. A very mild winter is invariably followed by a heavy weevil infestation during the following summer. Excessive rainfall during the summer months is also conducive to greater weevil activity. In prairie regions where the insect obtains little or no protection through the winter, it never becomes so numerous as in other quarters where conditions favorable for hibernation are found. The Bureau of Crop Estimates of this department in the fall of 1920 estimated the average annual loss for the last four years to be about \$300,000,000.

Hibernation takes place in the adult stage. After frost in the fall the last surviving generation of adults seek such shelter as may be found under old cotton stalks and dead grass, or in near-by woods. In regions where Spanish moss is abundant, this material provides a favorite place for the weevil to pass the winter. An average of about 6 per cent of the weevils entering hibernation in the fall survive the winter. A very cold winter will reduce the number that will survive, and a very mild winter will augment it. In the spring the survivors emerge from hibernation, breed, and thus start another generation. Several generations are produced each year, each much more numerous than the last preceding. The period from generation to generation is about 25 days.

The boll weevil can not be eradicated, but certain measures may be taken which, under ordinary circumstances, will control it to the extent that a profitable crop of cotton may be raised.

During comparatively recent years a system of boll-weevil control by the use of calcium arsenate in dry-dust form has been developed. It has been thoroughly tested for the last seven years and has proved to be fairly successful. Specialized treatment of the plants with this arsenical is necessary for successful control. Publications giving details of this treatment are issued by the Bureau of Entomology.

In addition to the use of poison, certain other measures may be taken to reduce weevil damage. Fall destruction of the

cotton plants, either by burning or by plowing under, destroys the possible hibernating places of the weevil in the fields. If it can be done before the first killing frost great numbers of weevils will be destroyed.

The use of an early maturing variety of cotton is important. Likewise the seed should be planted as early in the spring as possible without risk of damage from frost. The object of this is to get the crop well along before the weevils

have become numerous enough to be destructive.

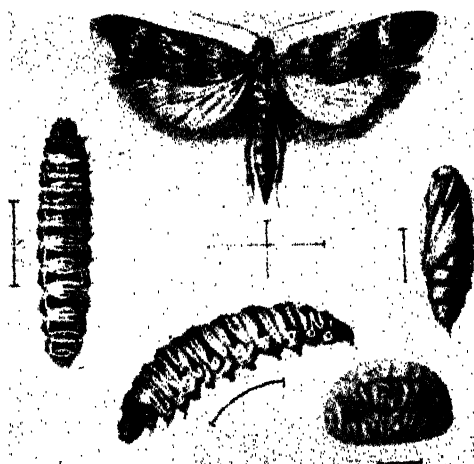


FIG. 24.—Pink bollworm. Adult, larva, pupa, and egg. (Enlarged.)

#### The Pink Bollworm

The pink bollworm has been known in other countries as a destructive cotton pest since the year 1842, at which time an English entomologist called attention to its depredations

in India. It was first noted in Egypt in 1911. In the same year the pest was introduced into Mexico, evidently in two importations of cotton seed from Egypt. The fact of its establishment in Mexico did not become known to our authorities until 1916. An embargo upon Mexican cotton seed was declared immediately, but prior to this order large quantities of seed were shipped to certain oil mills in Texas for grinding. On September 10, 1917, the first infestation on American soil was found in a cotton field at Hearne, Tex.

The Hearne district was then made a cotton-free zone—that is, no cotton was grown in the district—and was so maintained for three years. This district is now believed to be entirely free from the pest, demonstrating what may be accomplished where adequate control is maintained for a

period of years. Other areas that have been found infested are indicated on the map (Fig. 25).

The damage which might result from the uncontrolled infestation of the Cotton Belt of the United States by the pink bollworm can be estimated only by the damage done elsewhere, as so far none of the outbreaks in this country have been allowed to go entirely uncontrolled. In November, 1920, a commission organized by the Texas Chamber of Commerce, after a careful investigation in the Laguna district of Mexico, where the insect has been allowed to run its natural course, submitted a report indicating a loss of at

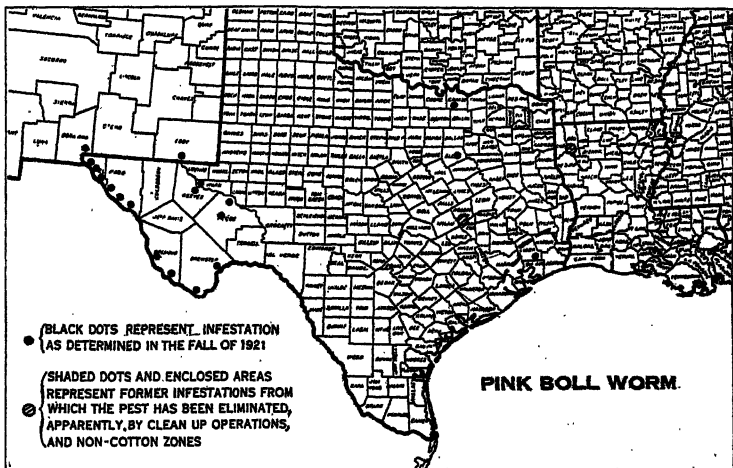


FIG. 25.—The pink bollworm was discovered in certain very limited areas in Texas in 1917 and in Louisiana during the winter of 1919-20. The pest has apparently been stamped out in Louisiana, and the actual infestation in Texas is greatly reduced.

least 50 per cent of the cotton crop of 1920 of that district due to the pink bollworm. As a matter of fact the pink bollworm is probably the most serious single cotton pest of the world. Its potential danger is greatly enhanced by the habit of the insect in the larval stage of entering the cotton seed and remaining there for several months of the year. By reason of this habit the pest is easily transported to any part of the globe where cotton seed is carried.

The only chance of exterminating this pest is by the enforcement for a period of years of noncotton zones for the

invaded areas, and any attempt at control which permits the continuation of the growth of cotton in such areas will be followed by the inevitable increase of the pest and its ultimate spread throughout the South. Perhaps the most determined fight which any nation has ever waged for the eradication of a single insect species within its borders has been carried on since the discovery of the pink bollworm in Texas, and the end is not yet.

#### The Cotton Bollworm.

Some doubt exists whether the cotton bollworm is a native species or came originally from some other country. At any rate, long before the advent of the boll weevil, it was one of the oldest, most widely distributed, and most destructive of injurious insects. It is a general feeder, attacking a great many wild and cultivated plants other than cotton.

A number of years ago the annual loss to the cotton crop caused by this pest was estimated at \$8,500,000. The damage, however, is somewhat sporadic, being worse in some years than in others; and is likely to be very uneven over the Cotton Belt in any one year.

The insect passes the winter in the soil in one of the immature stages. Fall or winter plowing is therefore advantageous in its control. In fact the same methods of control advocated for the boll weevil are applicable to this species. If calcium arsenate is used for the weevil, this should be sufficient for the control of the bollworm.

#### The Cotton Leafworm.

The cotton leafworm has been known to cotton planters in the United States since 1793. It is unique in that it does not spend the winter in this country. It is a native of tropical regions south of the United States, and in some years does not appear here in destructive numbers. At other times the adult moths fly northward, reaching our Cotton Belt fairly early in the season, and there lay eggs for another generation. This soon appears as the familiar defoliating worm. At the end of the season, when cold weather sets in, all stages of the insect within our borders succumb to climatic conditions.

The species is easily controlled by the application of calcium arsenate as for the boll weevil.

### Cotton Diseases in the United States.

Several important diseases attack the cotton crop and cause losses which in 1920 were estimated by the Plant Disease Survey of the United States Department of Agriculture at over 13 per cent of the total production.

#### Cotton Wilt.

Cotton wilt is a disease which causes stunting, wilting, and death of the entire plant. It is due to a fungus, *Fusarium*,

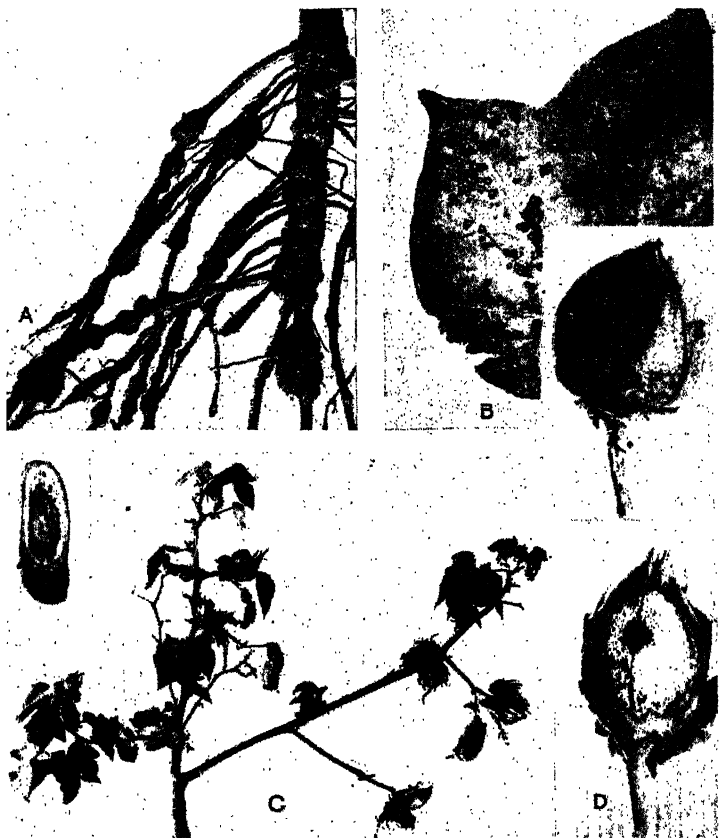


FIG. 26.—Four important diseases of cotton. A, An eelworm bores into cotton roots and causes rootknot. B, The angular leaf spot produces dead areas on the leaves and rotting of the bolls. C, The wilt disease stunts the plants and causes blackening of the inside of the stalks. D, This boll rot is due to anthracnose.



which enters the roots and plugs the water vessels. This parasite remains indefinitely in the soil, so that infested fields cannot be planted to the ordinary kinds of cotton. Resistant varieties bred by the Department of Agriculture have come into general use, however, and constitute an effective remedy for wilt. This trouble is widely distributed in the sandy soils of the coastal plain, from southern Virginia and North Carolina to Arkansas and eastern Texas, and is occasionally met in the Piedmont and other districts. (See Fig. 26.)

#### Texas Root-Rot.

Texas root-rot is due to another serious soil-infesting fungus, which occurs from Texas and Arkansas westward, principally on the black waxy or heavier types of soils. This causes a wilting of cotton over large areas in midsummer and constitutes a serious problem, as alfalfa, sweet potatoes, many fruits, and other crops are also susceptible, and because no thoroughly effective remedy is known.

#### Root-Knot.

Root-knot, a disease characterized by abnormal galls or swellings of the roots, is due to a tiny eelworm or nematode. The plants are dwarfed and the yield reduced. Root-knot occurs commonly in association with wilt on the same types of sandy soil. It attacks a very large number of other crops. Its control is based on rotation with immune crops or varieties, involving a readjustment of crop rotation.

#### Rust.

Rust is a name commonly used for a trouble marked by the early defoliation and premature death of cotton on soils lacking in vegetable matter and potash or poorly drained. It occurs throughout the Cotton Belt and causes large losses annually. The trouble is controllable by good farming methods, particularly by the use of potash fertilizers, stable manure, or green manuring, and by drainage.

#### Anthracnose

Anthracnose is a fungous disease of the cotton plant spread through the use of infected seed. It may cause a damping-off of the young seedlings and some injury to the plant, but

is most harmful as a cause of boll rot in wet weather. Anthracnose occurs to a greater or less extent over the entire Cotton Belt. It may be controlled by crop rotation and the use of disease-free seed.

#### Angular Leaf-Spot.

Angular leaf-spot, or bacterial blight, can be found in nearly every cotton field throughout the Cotton Belt as a leaf-spot, stem blight, and boll rot; but Upland cotton is quite resistant to it, and the losses are therefore not as great as in Egyptian cotton, which is very susceptible. The most effective method of control combines the use of disease-free seed with crop rotation.

All of these diseases are described more fully in Farmers' Bulletin 1187.

#### Cost of Production.

The problem of making ends meet has been especially serious for cotton growers in 1920 and 1921. Expenses have been high and prices low. Relief has been sought in efforts to enhance the prices to producers by various methods without marked success. Since the prices for each crop are determined after production and without regard to costs, farmers must attempt to forecast prices and to adjust operations so as to produce at a cost which will return a profit at the price for which the cotton will sell. Some farmers may not find it possible to reduce their costs low enough to meet prospective low prices for cotton, but may be able to produce something else with profit. In any case a knowledge of costs may be helpful to a farmer in determining how much cotton he should try to produce and how much he may profitably expend in producing it.

A grower who knows his own actual cost of production, and has average or standard figures to compare with his own, is in a fair way to stop small leaks in his expenses and to reinforce those features of his practice in which he has an advantage.

To assist cotton growers in establishing reasonable averages and working standards and to assemble cost information, which individuals acquire only slowly, the Office of Farm Management and Farm Economics undertook compre-

hensive studies of the cost of producing cotton. (See Fig. 27.) The first of these was made for the crop of 1918, in 10 representative counties in 4 States, the actual cost of producing cotton in 1918 being worked out for 842 farms. (See Bulletin 896, U. S. Dept. of Agriculture.) A similar study was made for the crop grown in 1919, the results of which are summarized in the charts on pages following.

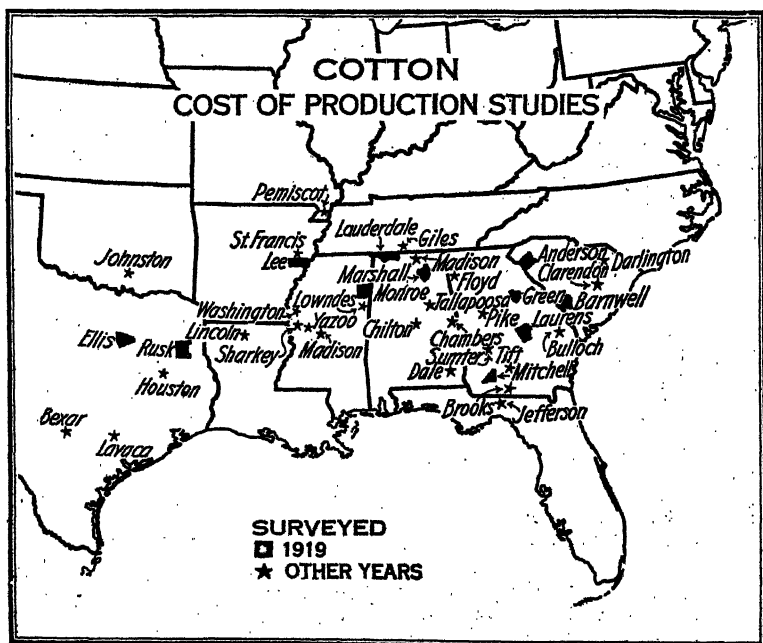


FIG. 27.—Location of surveys and cost of production studies in the Cotton Belt. The first of these was made for the crop of 1918 in 10 representative counties in 4 States. The results of the surveys made in 1919 are summarized in charts that follow.

### Variation in Cost of Production.

A farmer who is keeping his own records and comparing with others must recognize the fact that costs necessarily vary from farm to farm, as well as from one region to another. This is due to variations in the character of producers themselves, as well as in the character of the land and of the methods employed in growing the crop. The variation in the net cost of lint cotton per pound on 783 farms in 1919 (Fig. 28), illustrates the wide range of costs.

**VARIATION IN NET COST OF PRODUCTION OF LINT COTTON  
ON 783 FARMS  
1919**

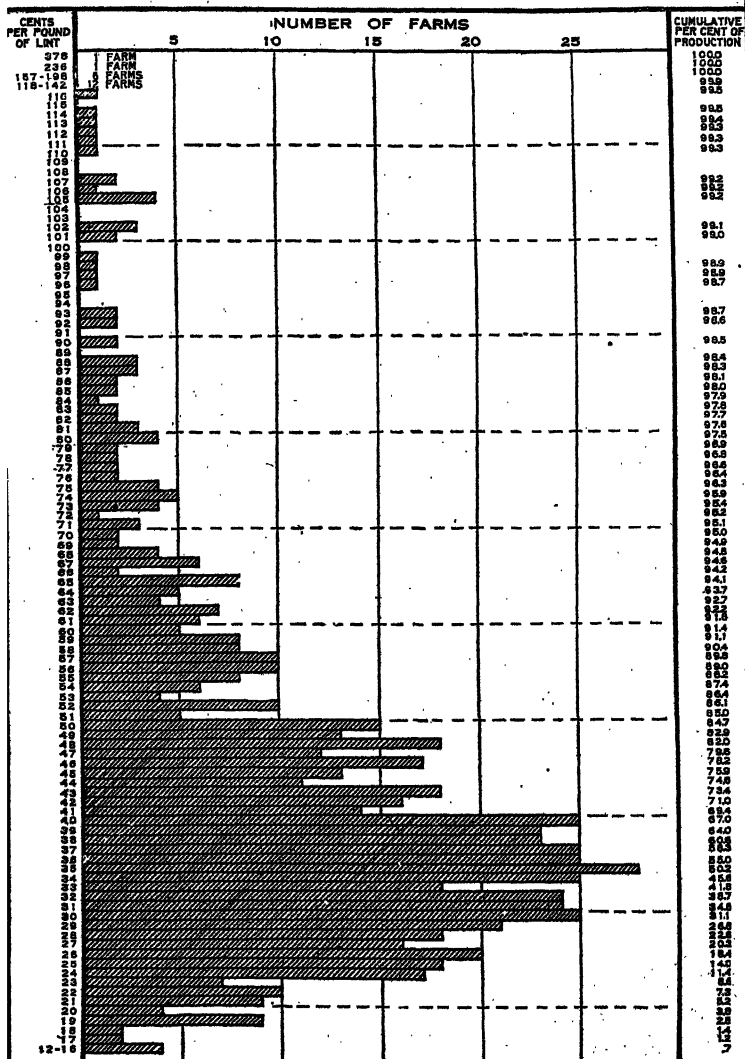


FIG. 28.—The net cost ranged from 12 cents to \$3.78 per pound of lint. One-half of the cotton cost 35 cents and less. The bulk of the cotton, 85 per cent, was produced at a cost up to 50 cents per pound.

It costs more to produce cotton in some regions than in others. The net cost per acre and the net cost per pound of lint in 1919 are shown in Figure 29 for each of 11 typical Cotton Belt counties. The average yields per acre reported in each case are shown in a column to the right of the chart. It will be noted that high cost per acre with good yields may result in low cost per pound, and low cost per acre with ordinary or poor yields in high cost per pound. In fact, judicious expenditures for fertilizer, good seed, good care of the crop, or a combination of them, pays. In any year much depends upon the seasonal weather. The 1919 crop was practically a failure in three of the counties surveyed.

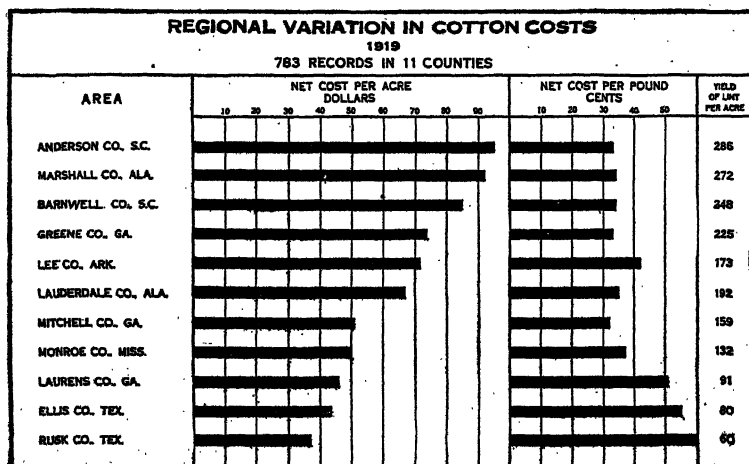


FIG. 29.—Variations both in the cost per acre and in the yield per acre cause variations in the net cost per pound of lint. The average acre in Anderson County cultivated at the highest cost in 1919 produced the highest average yield at the lowest cost per pound. It is not always the greater the cost the higher the yield. Note Lee County, Ark.

The distribution of costs differs with the practice, as is shown in Figure 30 for several of the more important factors. Thus labor per acre is relatively low in Ellis County, Tex., where the fields are large and level enough to permit the use of two horses and riding cultivators instead of a man to each mule. In the South Carolina and Georgia counties the use of fertilizer was very general and liberal, while in Ellis County, Tex., no fertilizer was used on cotton, and only one of the farms in Lee County, Ark., reported use of fertilizer. The value of the land, use cost, or rent of land is

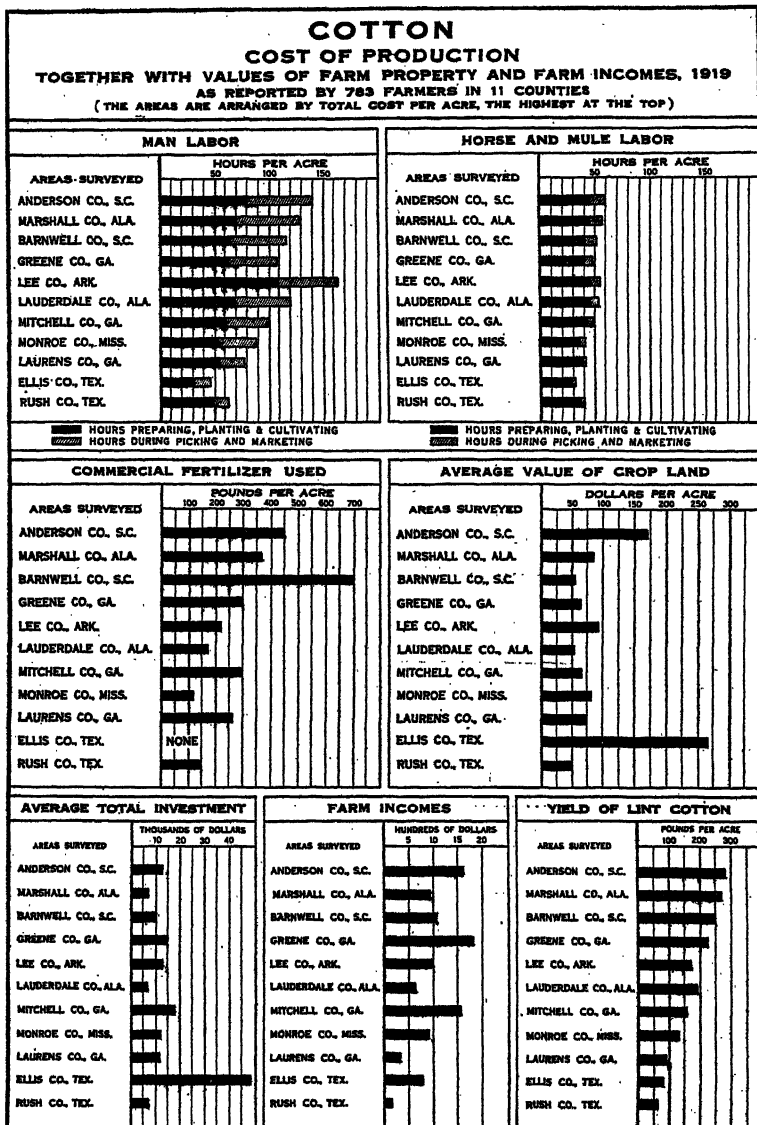


FIG. 30.—Counties are arranged in the order of the total cost per acre, the highest at the top. Note especially the contrast between Anderson County, S. C., and Ellis County, Tex. Cost per acre and yield per acre in Anderson County stands first among all the counties, is second in value of fertilizers used, in value of crop land, and in farm income; whereas Ellis County had next to the lowest yields produced with the smallest amount of labor, no fertilizer, and gave an average farm income on crop land averaging the highest in value of any of the counties.

another widely variable item, the lowest values being found in Rush County, Tex., and the highest in Ellis County, Tex. In addition to the average expense of labor, horse labor, fertilizer, and value of land, the chart shows also the value of the total farm capital, the farm income for 1919, and the yield of lint cotton per acre.

#### An Example.

As a guide for the use of farmers who wish to determine their actual costs for any season promptly and very closely,

*Example for figuring costs per acre of cotton and per pound of lint.*

| Items.   | Figures for Mitchell<br>County, Ga., crop<br>of 1919. |                   |         | Your farm. |        |       |         |        |       |
|--|---|-------------------|---------|------------|--------|-------|---------|--------|-------|
|  |   |                   |         | 1921       |        |       | 1922    |        |       |
|  | Amount.   | Price.            | Cost.   | Amount.    | Price. | Cost. | Amount. | Price. | Cost. |
| Labor:   |   |                   |         |            |        |       |         |        |       |
| Man.....   | 100 hours   | \$0.30            | \$30.00 |            |        |       |         |        |       |
| Mule.....  | 48 do.  | .25               | 12.00   |            |        |       |         |        |       |
| Seed (bushel—30<br>pounds).....  | 1 bushel  | 1.35              | 1.35    |            |        |       |         |        |       |
| Fertilizer.....  | 292 pounds  | 1.02 <sup>1</sup> | 6.13    |            |        |       |         |        |       |
| Total of foregoing<br>items (84.4 per<br>cent of operating<br>cost) <sup>2</sup> ..... |   |                   | 49.48   |            |        |       |         |        |       |
| Total operating<br>cost (100 per cent)   |   |                   | 58.63   |            |        |       |         |        |       |
| Credit seed.....   | 300 pounds  | 4.00 <sup>3</sup> | 12.00   |            |        |       |         |        |       |
| Net operating cost<br>per acre.....  |   |                   | 46.63   |            |        |       |         |        |       |
| Net operating cost<br>per pound<br>(\$46.63 ÷ 139<br>pounds).....                      |   |                   | .29     |            |        |       |         |        |       |
| Rent of land or in-<br>terest on invest-<br>ment, per acre..                           | \$37.00   | 6%                | 4.02    |            |        |       |         |        |       |
| Total net cost per<br>acre (including<br>rent).....                                    |   |                   | 50.65   |            |        |       |         |        |       |
| Total net cost per<br>pound (includ-<br>ing rent).....                                 |   |                   | .32     |            |        |       |         |        |       |

<sup>1</sup> Price, \$42 per ton.

<sup>2</sup> Operating costs represent all costs except interest on land. The remaining 15.6 per cent of operating costs is made up of manure, equipment, taxes, insurance, ginning, and overhead.

<sup>3</sup> \$80 per ton.

an example is worked out, using the figures for Mitchell County, Ga., and space is provided for setting down the figures for any individual farm. It is best to use the actual figures, if possible, but even in case no attention has been paid to the time and materials used one can not go very far astray if careful estimates are made by means of comparisons with average or standard figures. In each case the yield of cotton should be estimated as closely as possible, because errors in the yield will make considerable differences in the computations of cost per pound.

### Costs and Prices.

Though producers are more or less at the mercy of consumers with respect to price, they can exercise considerable

### FARM PRICE OF COTTON AND THE PRICE OF FERTILIZER GEORGIA 1913 1918 AND 1921

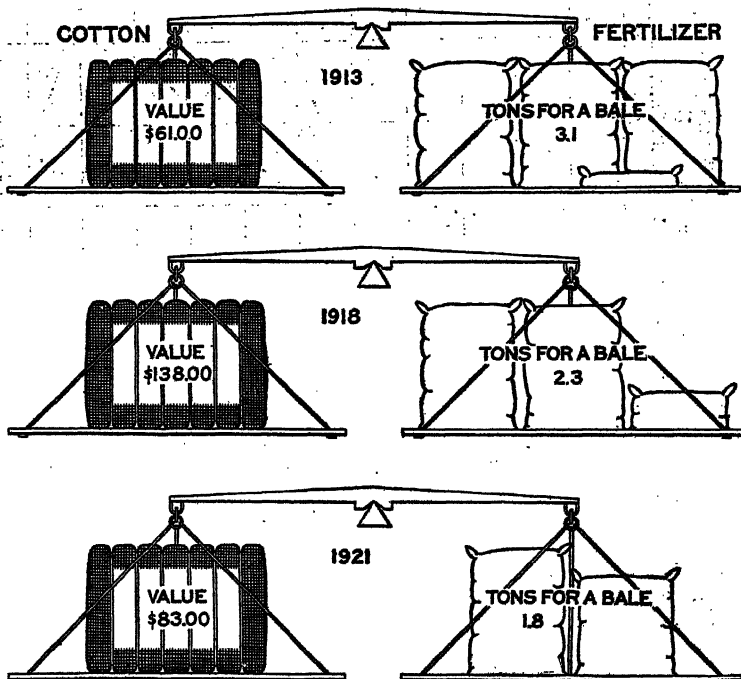


FIG. 31.—The cost of fertilizers is a very important item in the cost of production in the South Atlantic States. The data represented here for 1913, 1918, are taken from surveys of Sumter County, Ga. For 1921 prices represent Georgia.



control over the cost of their product. When prices were going up and the prospects for higher prices were still good costs were voluntarily increased, because it was good judgment to pay higher prices for labor, fertilizer, land, and machinery, if it were necessary in order to produce the cotton. The average cost of the 1918 crop was approximately 22 cents a pound, while the average farm price was

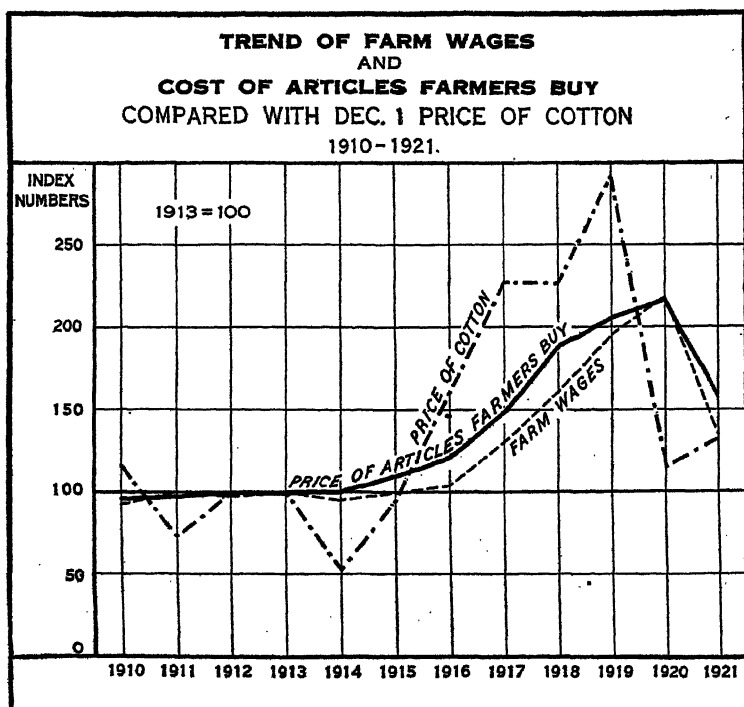


FIG. 32.—The price of cotton fell to a low point in 1914, rose to high points 1916-1919, and fell to a low point in 1920. Wages and prices of articles farmers buy rose less rapidly in the period of inflation and fell more slowly with deflation.

28.76 cents a pound, or enough to cover the cost of 85 per cent of the crop. Prices were still rising in 1919 and costs averaged 35 cents a pound, which was just about the farm price of 35.36 cents a pound, and half the growers failed to make costs. When the crop of 1920 was planted cotton prices were still high and no particular effort was made to cut expenses. While the crop was growing the price was falling, with the result that the crop produced at a high

cost had to be sold at a low price. Some retrenchment was made in 1921, as evidenced by the lower wages paid and the lower prices for materials, but not enough to offset the combined effect of a good crop, a large hold over, and a stagnant market. The relative changes in the cost of production for the years 1910 to 1921 are indicated in Figure 32, farm wages and the prices of things farmers buy being used as an index of the movement of the cost of producing cotton.

### Organization for Profitable Production.

The cost of producing farm products, the farm income, and the welfare of the farm family and the community are strongly influenced by the enterprises selected and their relative magnitudes in the organization of the farm.

It has been found that those cotton farmers who in planning their cropping systems provide first for sufficient acreages of corn, small grains, hay, and other feed crops (including among these cowpeas, peanuts, velvet beans, and similar crops planted by themselves and interplanted among rows of other crops), not only to feed pigs, chickens, the farm work stock, and the family cows, but also to build up and maintain soil fertility, are able to produce cotton at low cost, and they get the best returns for land used and capital and labor expended. These farmers usually plan for as many acres of cotton as they can care for properly and harvest early with the available farm equipment and such outside assistance as may be relied upon.

Proper care of the crop involves thorough preparatory tillage, proper application of fertilizers and manures, thorough cultivation, and thorough and persistent combative measures against the boll weevil and other destructive insects.

After providing for farm needs, including fertility, and for such acreages of cotton as can be well cared for, other enterprises may be selected in order to make use of unutilized land and labor. Such enterprises may increase food and feed for sale or for some productive live stock enterprise, but care must be taken that these added enterprises do not seriously compete with cotton in its labor requirements or tend to diminish the fertility of the soil.

The choice of crops and groupings will vary according to conditions. For example, in Figure 33 are given the average

relative sizes of the crop enterprises on some of the more profitable 1-mule to 6-mule farms in communities in Sumter and Brooks Counties, Ga., in 1913 and 1914. A marked difference will be noted in the organization of the two communities. In the Sumter County community, after making fair provision for the farm needs, the remainder of the land was devoted largely to cotton, the most important commercial enterprise. In the Brooks County community the soil was thinner and it was necessary to pay particular attention to the maintenance of soil fertility, so a system was developed which gave a smaller acreage to cotton and paid particular attention to corn, legumes, feed crops, and hogs. Besides the

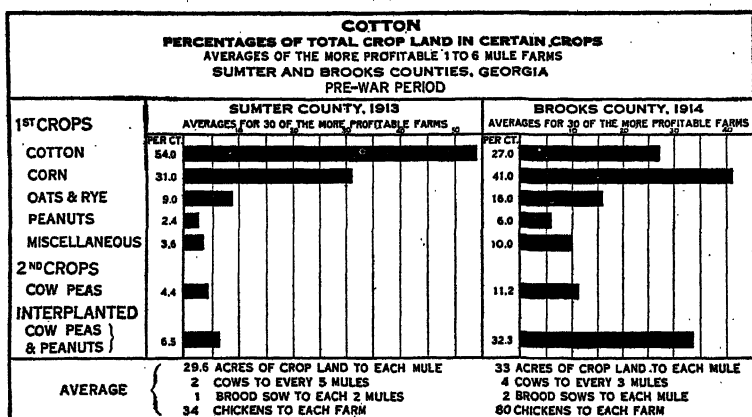


FIG. 33.—In Sumter County there is much greater specialization in cotton than in Brooks County. In the latter more attention is being given to the growing of crops that will maintain or improve soil fertility, consequently more live stock are kept and more leguminous crops are grown.

regular peanut crop, peanuts were planted between the corn rows on about one-third of the corn area. The Sumter County farms carried 2 cows to each 5 mules, while the Brooks County farms carried 4 cows to each 3 mules. The Sumter County farms carried 1 brood sow to each 2 mules, while the Brooks County farms carried 2 brood sows to each mule. Among the important miscellaneous crops on these farms were watermelons, sweet and Irish potatoes, sugar cane, and garden vegetables.

It is not intimated that these systems of cropping were the best that these farmers could have devised for their farms or for the communities represented, but they were evidently

better than the average in that they yielded comparatively high returns for the use of land, working capital, and labor.

Systems of cropping change as conditions change. Figure 34 gives the organization of crop enterprises on the more profitable 1-mule to 6-mule farms in Sumter County five years later, in 1918. The main difference between the 1918 and 1913 systems was a reduction in the percentage of land devoted to cotton in 1918 to better meet boll-weevil invasion and the high cost of fertilizers. The actual and relative number of cows and brood sows was increased. The 30 more profitable Sumter County farms in 1913 spent \$1,057 for feed, while the 1918 group spent only \$298 for this purpose. The 1918 system shows a larger planting of legume feed crops to reduce the cost of maintaining the live stock, to utilize land and labor not required by cotton, and also to maintain fertility better.

### Financing the Cotton Grower.

The production of cotton in the United States rests upon credit to a rather unusual extent compared with most other agricultural products. The chief agencies from which this credit is obtained by the cotton farmer are the bank, the merchant, and in the case of tenants the landowner. In this credit extension the merchant, of course, is essentially an intermediary between the banker and the farmer, while in the case of the tenant the landowner, by guaranteeing the repayment of the credit advanced, also acts as an intermediary, either between the bank and the tenant or the merchant and the tenant.

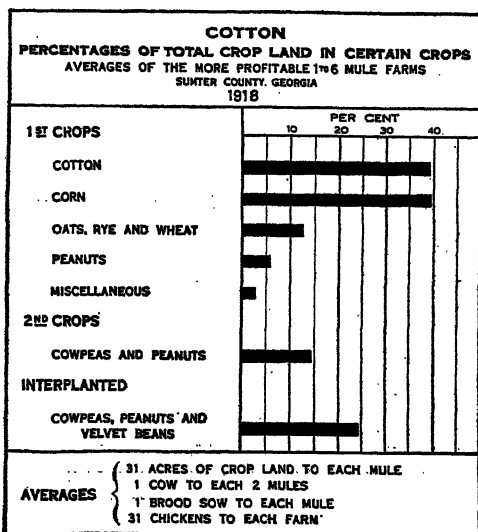


FIG. 34.—In 1918 cotton and corn held equal areas in Sumter County. Cowpeas, peanuts, and velvet beans were planted extensively after the other crops or interplanted with them.

Merchant credit as a rule is a particularly expensive and unsatisfactory form of credit, whether extended by the store-keeper, the implement dealer, or the cotton factor. The difference between cash prices and time prices usually far exceeds the cost of bank credit needed for the purchase of corresponding amounts of goods. The substitution of direct bank credit for merchant credit is therefore to be recommended wherever possible. The consolidation of numerous small loans into fewer and larger ones by means of credit associations would result in further economy. It is also to be hoped that the cotton farmer will, to an increasing extent, acquire and maintain his own operating capital and thus reduce the need for production credit and strengthen the security for such credit as is needed. Only in this way can be brought about a credit situation in which an ample supply of capital will be available on terms favorable to the borrower.

According to a study made by the Department of Agriculture in the spring of 1921, the average prevailing rate of interest on personal and collateral loans to farmers for each of the 10 leading cotton-producing States was as follows:

|                      | Per cent |
|----------------------|----------|
| North Carolina ..... | 6.23     |
| Tennessee .....      | 7.88     |
| South Carolina ..... | 8.06     |
| Mississippi .....    | 8.11     |
| Louisiana .....      | 8.34     |
| Alabama .....        | 8.46     |
| Georgia .....        | 8.94     |
| Texas .....          | 9.68     |
| Oklahoma .....       | 9.84     |
| Arkansas .....       | 9.70     |

In all of these States the actual average interest cost, however, was considerably higher than shown by the above figures, because of the prevalent practice among the banks in these States of collecting interest in advance, and of a common but less frequent practice of requiring borrowers to maintain a minimum deposit at the bank while the loan is outstanding.

Because of the relatively high percentage of tenancy in the cotton-producing States, the question of security for loans is especially significant. The following table shows the prevailing forms of security for personal and collateral loans to farmers in the so-called Cotton States.

*Form of security given for personal and collateral bank loans to farmers in 10 leading Cotton States; per cent of loans secured by various forms of security.*

| State.              | Note without indorsement. | Note with one or more indorsements. | Mortgage on live stock. | Crop lien. | Warehouse receipt. | Stocks and bonds. | Other ways. |
|---------------------|---------------------------|-------------------------------------|-------------------------|------------|--------------------|-------------------|-------------|
| North Carolina..... | 10.5                      | 68.6                                | 1.7                     | 5.2        | 2.1                | 7.5               | 4.4         |
| South Carolina..... | 9.1                       | 41.0                                | 13.6                    | 20.2       | 9.7                | 4.8               | 1.6         |
| Georgia.....        | 12.5                      | 50.1                                | 14.5                    | 4.9        | 10.0               | 3.5               | 4.5         |
| Tennessee.....      | 18.1                      | 67.2                                | 5.0                     | 1.5        | .8                 | 5.8               | 1.6         |
| Alabama.....        | 10.4                      | 20.1                                | 31.5                    | 26.1       | 7.5                | 2.4               | 2.0         |
| Mississippi.....    | 12.7                      | 27.0                                | 20.2                    | 15.1       | 8.0                | 9.1               | 7.9         |
| Arkansas.....       | 12.1                      | 37.9                                | 22.7                    | 19.9       | 3.0                | 2.2               | 2.2         |
| Louisiana.....      | 15.5                      | 52.7                                | 12.4                    | 5.2        | 2.7                | 9.0               | 2.5         |
| Oklahoma.....       | 17.2                      | 12.9                                | 49.3                    | 18.1       | .7                 | 1.2               | .6          |
| Texas.....          | 21.9                      | 18.0                                | 38.1                    | 18.3       | 1.6                | 1.1               | .0          |

Personal notes with one or more indorsements are the prevailing form of security in a large majority of these States. Mortgages on live stock and crop liens come next in importance. Warehouse receipts are as yet seldom used by the farmer, but will no doubt increase in popularity as adequate warehouse systems are established.

One of the most common complaints heard with reference to bank loans to farmers from these States, as well as from those in other sections of the country, is that the term is frequently too short to meet the farmer's credit needs. The prevailing term of such loans may be seen from the following table, based on the study to which reference has already been made:

*Average term of personal and collateral loans to farmers: Per cent of banks reporting various average terms, March, 1921.*

| State.              | One to thirty days. | One to three months. | Three to six months. | Six to nine months. | Nine to twelve months. | More than one year. |
|---------------------|---------------------|----------------------|----------------------|---------------------|------------------------|---------------------|
| North Carolina..... |                     | 28.0                 | 53.7                 | 15.9                | 2.4                    |                     |
| South Carolina..... |                     | 12.5                 | 40.1                 | 40.8                | 6.6                    |                     |
| Georgia.....        |                     | 3.9                  | 50.3                 | 38.5                | 7.3                    |                     |
| Tennessee.....      |                     | 28.5                 | 45.0                 | 14.6                | 11.9                   |                     |
| Alabama.....        |                     | 4.2                  | 30.5                 | 39.9                | 25.4                   |                     |
| Mississippi.....    |                     | 9.2                  | 31.2                 | 38.5                | 19.3                   | 1.8                 |
| Arkansas.....       |                     | 7.2                  | 36.7                 | 45.9                | 10.2                   |                     |
| Louisiana.....      |                     | 9.3                  | 37.2                 | 37.2                | 16.3                   |                     |
| Oklahoma.....       | 0.4                 | 11.6                 | 49.6                 | 31.9                | 6.5                    |                     |
| Texas.....          |                     | 7.9                  | 52.1                 | 33.0                | 6.7                    | .3                  |

### Cotton Handling and Marketing.

The days of the American homespun are past, and now the entire American cotton crop is produced for the market. The course of the cotton from the producer to the mills depends on the point of origin, the location of the mills for which it is destined, the means of transportation, and the methods of trading. The price that the producer receives depends not only upon the supply and demand at the consuming points, but also upon the cost of handling from the producer to the mills, the middlemen's profits, and the ability of the producer to take advantage of the most economical methods of marketing his crop.

The process of separating the lint from the seed is known as ginning. This the producer usually has done before he sells, which enables him to dispose of both the seed and the fiber to the best advantage. The producer may sell his cotton at once or hold it until some future date. He may sell directly to a mill buyer or to some one of the numerous grades of dealers in cotton.

Southern cotton mills consume about one-fourth of the American crop, the bulk of which is produced locally in the South Atlantic States. The rest of the crop must be transported by rail or water either to northern mills or abroad. The movement of the great American cotton crop therefore necessitates an extensive system of transportation as well as of markets.

### Short Staple and Long Staple Cottons.

The length and the character of the fiber or staple are the most important of the factors that determine the value of cotton. Cottons differing in length and character of fiber require special methods in handling and marketing. Commercially all cotton is divided into two classes—short staple, that of  $1\frac{1}{8}$  inches and under in length, and long staple, cotton  $1\frac{1}{8}$  inches and over in length of fibers. Cottons, however, having a staple length of  $1\frac{1}{8}$  inches usually command a premium over short-staple cottons of  $\frac{1}{8}$  to 1 inch in length of staple. The length and strength of fiber produced in any locality depend on the variety planted, the soil, climatic conditions, and cultural methods.

*Short staple.*—Short-staple cotton is grown in all parts of the Cotton Belt and constitutes the bulk of the American

crop, or an average of 92 per cent. The length of the fiber of this cotton varies from three-fourths to  $1\frac{1}{16}$  inches. In parts of the Piedmont region and on the better types of soils the length is often more than an inch, while on the sandy and other poorer soils it may be less than seven-eighths of an inch. On the rich river bottoms and on the black prairie lands of Texas and Oklahoma the cotton grown is usually  $1\frac{1}{16}$  inches in length and has a characteristic strong, hard staple.

*Long staple.*—Upland varieties with fiber  $1\frac{1}{8}$  to  $1\frac{3}{8}$  inches long are grown in many parts of the South, the production of some sections being recognized by characteristic differences in quality and strength of staple. The bulk of the long-staple upland cotton is produced in the Yazoo-Mississippi Delta, the north central section of South Carolina, and the bottom lands of Texas and Arkansas. (See table following:)

*Comparison of production of long-staple cotton ( $1\frac{1}{8}$  inches and above in length) with production of short-staple cotton (under  $1\frac{1}{8}$  inches in length) in the United States; estimates 1919 and 1920.*

| State.           | Bales, thousands, i. e. 000 omitted. |        |   |       |  |       | Per cent.                    |       |   |       |  |       |
|------------------|--------------------------------------|--------|---|-------|--|-------|------------------------------|-------|---|-------|--|-------|
|                  | Under $1\frac{1}{8}$ inches.         |        | $1\frac{1}{8}$ to $1\frac{1}{2}$ inches, inclusive. |       | Over $1\frac{1}{2}$ inches. <sup>1</sup> |       | Under $1\frac{1}{8}$ inches. |       | $1\frac{1}{8}$ to $1\frac{1}{2}$ inches, inclusive. |       | Over $1\frac{1}{2}$ inches. <sup>1</sup> |       |
|                  | 1919                                 | 1920   | 1919  | 1920  | 1919                                     | 1920  | 1919                         | 1920  | 1919  | 1920  | 1919                                     | 1920  |
| Alabama.....     | 711                                  | 662    | 2   | 1     | -----                                    | ----- | 99.7                         | 99.9  | 0.3   | 0.1   | -----                                    | ----- |
| Arkansas.....    | 718                                  | 947    | 136   | 225   | 30                                       | 37    | 81.2                         | 78.3  | 15.4  | 18.6  | 3.4                                      | 3.1   |
| Arizona.....     | 21                                   | 21     | -----   | ----- | 39                                       | 82    | 35.0                         | 20.6  | -----   | ----- | 65.0                                     | 79.4  |
| California.....  | 45                                   | 64     | 10  | 3     | 1  | 8     | 80.3                         | 85.3  | 17.9  | 4.0   | 1.8                                      | 10.7  |
| Florida.....     | 14                                   | 15     | -----   | 2     | 2  | 1     | 87.5                         | 82.8  | -----   | 11.1  | 12.5                                     | 6.1   |
| Georgia.....     | 1,639                                | 1,384  | 18  | 27    | 3  | 4     | 98.7                         | 97.8  | 1.1   | 1.9   | .2                                       | .3    |
| Louisiana.....   | 290                                  | 375    | 7   | 10    | 1  | 2     | 97.3                         | 96.9  | 2.4   | 2.6   | .3                                       | .5    |
| Mississippi..... | 619                                  | 612    | 300   | 252   | 42                                       | 29    | 64.4                         | 68.5  | 31.2  | 28.2  | 4.4                                      | 3.2   |
| Missouri.....    | 60                                   | 71     | 4   | 5     | -----                                    | 1     | 94.4                         | 92.3  | 5.6   | 6.4   | -----                                    | 1.3   |
| North Carolina.. | 817                                  | 900    | 12  | 10    | 1  | 2     | 98.5                         | 98.7  | 1.4   | 1.1   | .1                                       | .2    |
| Oklahoma.....    | 937                                  | 1,125  | 77  | 192   | 2  | 4     | 92.2                         | 85.2  | 7.6   | 14.5  | .2                                       | .3    |
| South Carolina.. | 1,309                                | 1,437  | 93  | 144   | 24                                       | 29    | 91.8                         | 89.3  | 6.5   | 8.9   | 1.7                                      | 1.8   |
| Tennessee.....   | 293                                  | 312    | 15  | 11    | 2  | 1     | 94.5                         | 96.2  | 4.9   | 3.5   | .6                                       | .3    |
| Texas.....       | 2,916                                | 4,091  | 177   | 230   | 6  | 5     | 94.1                         | 94.6  | 5.7   | 5.3   | .2                                       | .1    |
| All others.....  | 28                                   | 27     | -----   | ----- | -----                                    | ----- | 100.0                        | 100.0 | -----   | ----- | -----                                    | ----- |
| United States..  | 10,417                               | 12,049 | 851   | 1,112 | 153                                      | 205   | 91.2                         | 90.2  | 7.5   | 8.3   | 1.3                                      | 1.5   |

<sup>1</sup> Including 91,965 running bales of American-Egyptian and 1,725 bales of Sea Island cotton for 1920, reduced to 500-pound bales.



*Sea island.*—Sea island is a distinct type of cotton, noted for its length of staple,  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches, and its strong, very fine, and silky fibers. The sea-island cotton produced on the islands off the coast of South Carolina has the longest and finest staple of any cotton. That grown on the coastal plain of Georgia and north Florida is somewhat shorter and coarser. At present the boll weevil has practically stopped the growing of sea-island cotton in the United States, the crop of 1920 amounting to less than 2,000 bales of 500 pounds each. Recently, however, a new upland variety called Meade has been developed in this section and is replacing the sea-island cotton. Meade cotton has a very fine strong staple  $1\frac{1}{8}$  to  $1\frac{3}{4}$  inches in length, comparable with sea island.

*American Egyptian.*—The American-Egyptian cotton crop is produced chiefly in the valleys of the Salt, Gila, and Colorado Rivers of Arizona, and in the Palo Verde, Imperial, and San Joaquin Valleys of California. Practically the entire crop is of a single variety, known as Pima, which produces a staple of from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  inches in length.

#### Ginning.

Two types of machines are now in use for separating cotton fibers from the seed on which they grow. They are known as roller and saw gins. The roller gin is the older type. In the roller gin the fibers are caught between a leather-covered roll and a fixed steel bar or blade, while a movable bar knocks the seed loose. The roller gin is especially adapted for use in ginning varieties having slick or smooth seed and long fibers that are easily detached from the seed coat, such as sea island, American Egyptian, and Meade. The output of the roller gin is smaller per day than that of the other type, known as the saw gin. In the saw gin the fibers are caught in the teeth of circular saws and pulled through a slot between metal ribs. The slot is adjusted so as to permit the passage of the fibers but to prevent the passage of the seed, so that the cotton is stripped from the seed, which fall back and out of the way. The saw gin is especially adapted for the ginning of short staples with fuzzy seed and fibers that are tightly attached to the seed coat.

While the ginning of cotton is done primarily in order to bale the farmer's product so that it may be sold, it is the first

step in the preparation of the fiber for spinning, and therefore the condition in which the lint comes from the gin has a most important bearing on its future value and is the primary basis for grades on which purchases are made. Some of the factors influencing the grade of cotton as it comes from the gin are the care with which it has been harvested and prepared for ginning, i. e., whether ripe, clean, and dry; second, the condition of the ginning mechanism and the skill of operation, i. e., clean machinery in prime condition, operated both as to the feeding and speed with care, taking into consideration the type of the cotton being ginned and its physical condition.

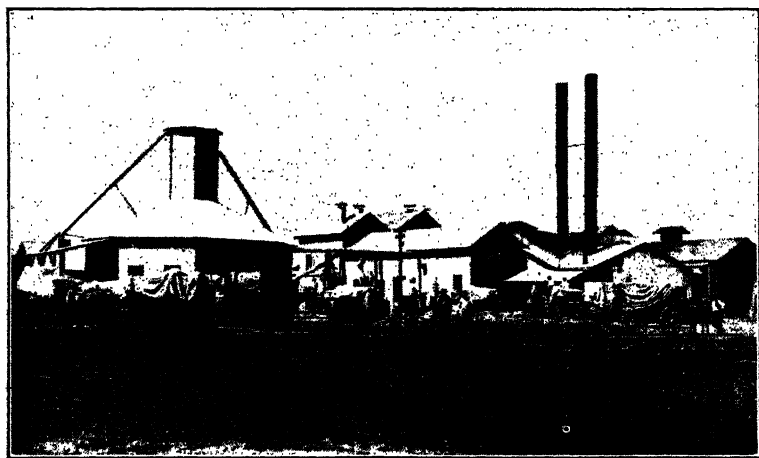


FIG. 35.—Cotton gin in Texas. Each wagon holds enough seed cotton to make a bale of lint weighing about 500 pounds.

*Baling.*—As the lint or fiber (or raw cotton) comes from the gin it is put up in packages of different sizes and shapes. The bulk of the American crop, however, is packed into a press box 54 inches long and 27 inches wide and to a depth of about 45 inches. This makes the standard “flat” or “square” bale, which weighs about 500 pounds. It is covered on two sides and on the ends with bagging and is tied with six iron bands. In the western part of the Cotton Belt there are some gins which make bales cylindrical in shape but known as “round” bales. These are approximately 35 inches long and 22 inches in diameter, are completely covered with bagging, and weigh about 250 pounds. The sea-

island cotton produced in South Carolina is put up in bags  $7\frac{1}{2}$  feet long and  $2\frac{1}{2}$  feet in diameter and weigh approximately 350 pounds.

*Compressing.*—With the exception of the round bale and the recently devised gin-compressed bale, which is a small square bale and, like the round bale, built up under pressure automatically as the ginning is done, the American cotton bale is of comparatively low density and is not only unwieldy but does not fit into either freight cars or ship holds economically. In order that the maximum number of pounds of cotton may be packed for shipment, square bales are subjected to a recompression by which the cotton is compacted to a high density and the bale reduced to approximately one-half its original size. At the same time patches are added to cover all sample holes and to make up the usual tare allowance. Plants for recompressing the bales are usually located at interior markets and railroad concentration points and are known as “compresses.”

The standard 500-pound square bale as it comes from the gin has a density of only 12 to 15 pounds per cubic foot, and from 30 to 35 of them fill a 36-foot box car. When they are compressed at the ordinary or standard compresses to a density of 22 to 24 pounds per cubic foot, from 65 to 75 bales may be loaded into a car. The “round” gin-compressed bale, weighing about 250 pounds, has a density of 32 to 37 pounds per cubic foot, and approximately 200 of them may be packed in a car, equivalent to 100 standard bales. The square gin-compressed bale has a density of about 35 pounds to the cubic foot.

At some of the concentration points and ports, such as Houston, Galveston, New Orleans, Mobile, Augusta, and Savannah, there are “high-density” compresses, which give the bale a density of 35 pounds or more per cubic foot, which results in a still greater saving of car and cargo space.

*Custom ginning.*—In the early days of the cotton industry the larger plantations owned and operated gins, but with the extension of the industry and the growth of the number of small farms came the establishment of public gins. The efficiency of the public gins has led to the abandonment of practically all of the old plantation gins. Even where plantation gins still operate they also, as a rule, do custom

ginning. Public ginneries are now established in practically every locality where the production of cotton is sufficient to support one. During the season of 1920-21 there were in actual operation 18,440 ginneries, which ginned on an average of 720 bales each.

The modern public gin is equipped with pneumatic elevators and distributors, by which the seed cotton brought in by the growers is sucked up from the wagons through pipes and, after passing through cleaning apparatus, is distributed to the different ginning machines or gin stands, as they are called. (See Fig. 35.) The lint, after it is taken from the seed by the saws, is again caught in a blast of air and conveyed through flues to the condenser and baling press. The seed fall into a trough, through which they are carried either by a screw conveyor or by an air blast to a seed chute or to bins in a seed house. If the grower desires the return of his seed he drives his wagon under the seed chute and receives them as they come from the gin. If, however, he sells the seed to the ginner or to some other agent of the cotton-oil mills, they are delivered to the bins in the seed house and from there transferred in car lots to the oil mills. Public ginners usually make a charge for ginning by the hundred pounds of seed cotton, and an extra charge for the bagging and ties applied to the bales. These charges or tolls vary in the different sections according to the costs involved. They are regulated also to some extent by agreement and by local laws.

*Selling cotton in the seed.*—In a few sections of the Cotton Belt some farmers sell their cotton before it is ginned, or "in the seed," as it is known. The practice of selling cotton in the seed is most prevalent in those sections where the cotton-growing industry has only recently developed or where cotton is not very extensively grown. The ginners buy the cotton seed as it is brought in and gin it whenever enough has accumulated for a run. In settling with the producer the average outturn or lint percentage of the community is usually taken as a basis. The ratio of seed to lint is approximately 2 to 1, though some of the improved varieties turn out from 35 to 40 per cent of lint. The application of averages therefore often results in not giving the individual farmer the price he deserves. From every angle the practice

of selling cotton in the seed is most unfortunate, since the producer has no incentive for growing better varieties or for making any effort to improve his grade and is prevented from maintaining the purity of his seed supply.

#### Handling Cotton Seed.

As indicated above, about two-thirds of the weight of the cotton, as it is picked and hauled to the gin, is seed. With the exception of such seed as is required for planting, practically all cotton seed now reaches the oil mills, where it is crushed and the oil extracted. The seed is now a valuable part of the cotton crop and is becoming still more valuable as the demand for its products increases.

*Oil mills.*—Cotton seed being bulky, the cost of transportation makes long-distance shipments unprofitable; consequently oil mills have been located in the producing region, generally at points at which the seed can be collected conveniently from the ginneries. In 1920 there were 675 seed-crushing oil mills well distributed throughout the Cotton Belt. The four primary products from crushing cotton seed are linters, hulls, cake, and oil. The process of crushing, briefly described, is as follows:

The seed first are cleaned of dirt and trash, then passed through a delinting machine, which removes the short lint or fuzz, making what are known as "linters"; it is then passed through machines which crush or cut the seed in fine pieces and separate the hulls from the kernels; and finally the oil is expressed from the kernels in hydraulic presses, leaving a residue which is called "cake" and which when ground becomes cottonseed meal. In the "cold-press" mills the whole seed is crushed and no effort is made to separate hulls from kernels.

#### Warehousing.

The warehousing of cotton after ginning is very important economically. Leaving the baled cotton exposed to the weather results in large losses annually from the rotting of the fiber. Such damage is commonly known as "country damage." The cotton warehouse is a place of shelter and protection from fire and theft; a place for classing and assorting to meet mill requirements; and finally it is a place

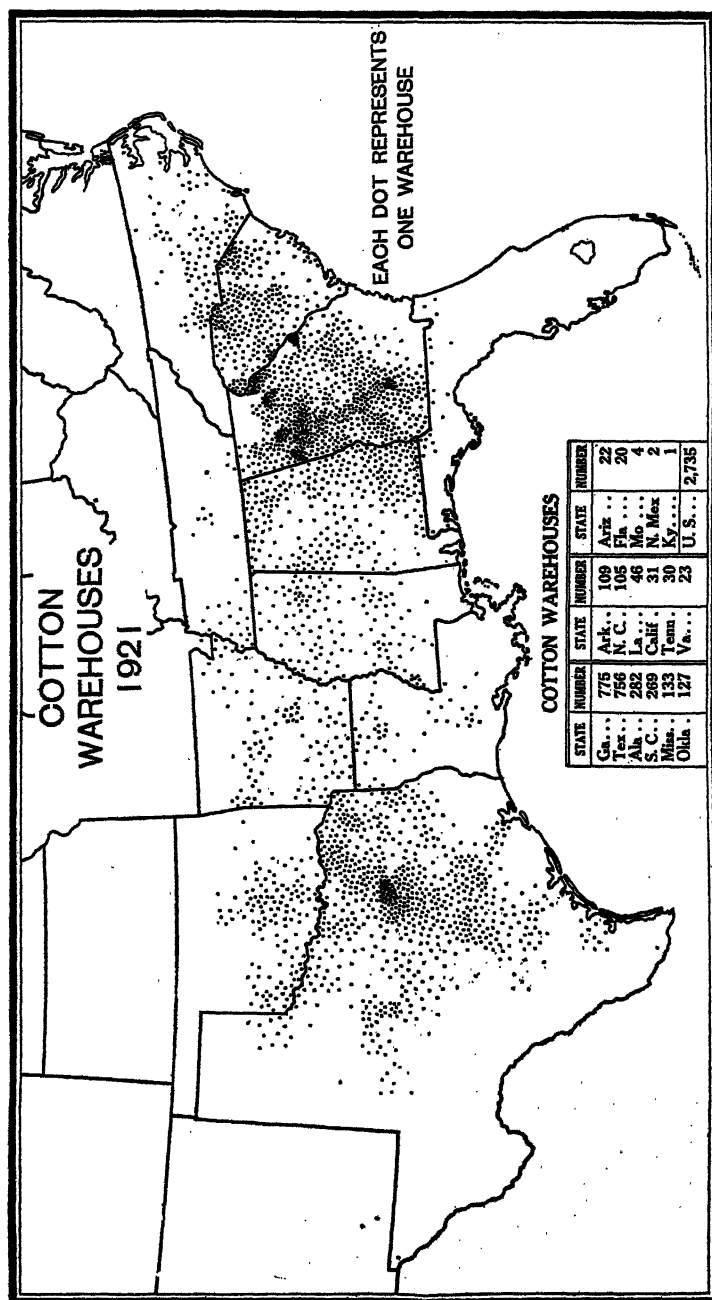


FIG. 38.—There are warehouses at many local markets, as well as at the larger concentration points throughout the South. Where cotton is customarily marketed as soon as it is ginned there are comparatively few warehouses, except at concentration points.

where cotton may be deposited under conditions which enable the owner to obtain money advance upon it until such time as he may desire to sell. Receipts of responsible warehouses are considered among the best kinds of security. The Federal warehouse act of August, 1916, facilitates the use of warehouse receipts by holders of cotton in financing themselves while holding for favorable market conditions.

*Warehouses.*—Warehouses for storing cotton have been built at many local markets, as well as at the larger concentration points throughout the South. (See Fig. 36.) In Arkansas, Oklahoma, and Texas, where much of the cotton is customarily marketed as soon as it is ginned, and is shipped

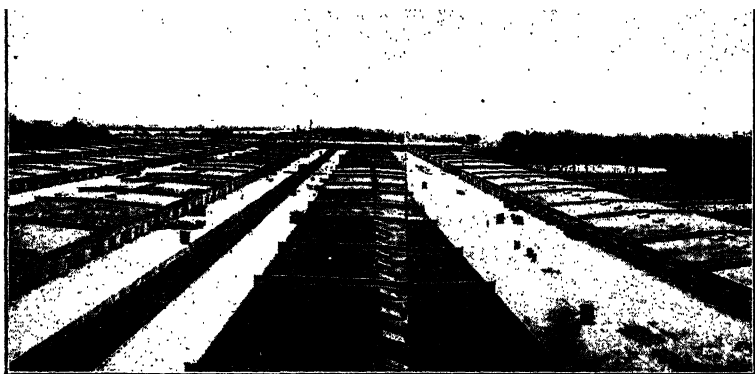


FIG. 37.—A modern concentration and export warehouse of semislow-burning construction. The wide courts are for receiving from cars and for delivery to the compress in the background. The hose houses are located between the buildings.

directly to the mills or exported, there are comparatively few warehouses, except at concentration points where the cotton is held by merchants. The same statement applies generally to Tennessee, Mississippi, and Louisiana. In the Eastern States warehouses are usually accessible to the farmers.

#### Grading Cotton.

The value of cotton to the consuming mills is measured not only by the length, strength, and uniformity of the staple but also by its color and by the amount of foreign material that it contains. While in the wild state species of cotton are found with fibers of a variety of colors, the principal varieties of commerce, with the exception of a few, such as the brown Egyptians, are of a creamy or pure white color.

Seasonal conditions, such as frosts or excessively damp or rainy weather, stain and discolor cotton. In some sections cotton unduly exposed to the weather after maturing receives a bluish cast or becomes mildewed. This condition so frequently occurs in some sections as to lead to the belief that the damage is connected with certain types of soil. The fibers of "blue cotton" are usually weakened. Dirt, sand, broken leaves, and stems become lodged in cotton fibers during storms and long exposure in the field, and when picked and ginned with the cotton reduce its value in proportion to the quantity of such foreign matter present.

*Standards for grading.*—There has always been considerable confusion in the marketing of cotton, due to the fact that nearly every market had its own grades, and these were frequently changed to meet special crop conditions. In order to simplify cotton marketing by making a single set of standard grades, on which quotations and

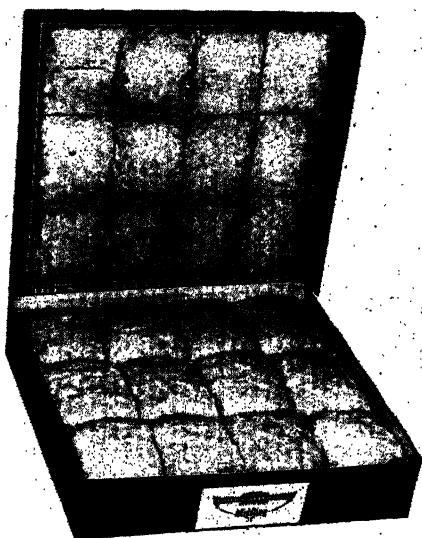


FIG. 38.—Grading by standards. A full set of white standards consists of 9 boxes, each containing 12 samples of the same grade of cotton. The 12 samples indicate the range of diversity allowed within the grade.

purchases and sales could be based, the United States Department of Agriculture was authorized in the appropriation bill for the fiscal year 1909 to prepare grade standards. Subsequent legislation enlarged these powers and authorized the sale of copies of the Official Cotton Standards to all who desired them. The United States Official Cotton Standards for grade have now been adopted by the exchanges of practically all the leading cotton markets of this country. Approximately 2,500 full and fractional copies of the standards have been sold to the American cotton trade. Copies have



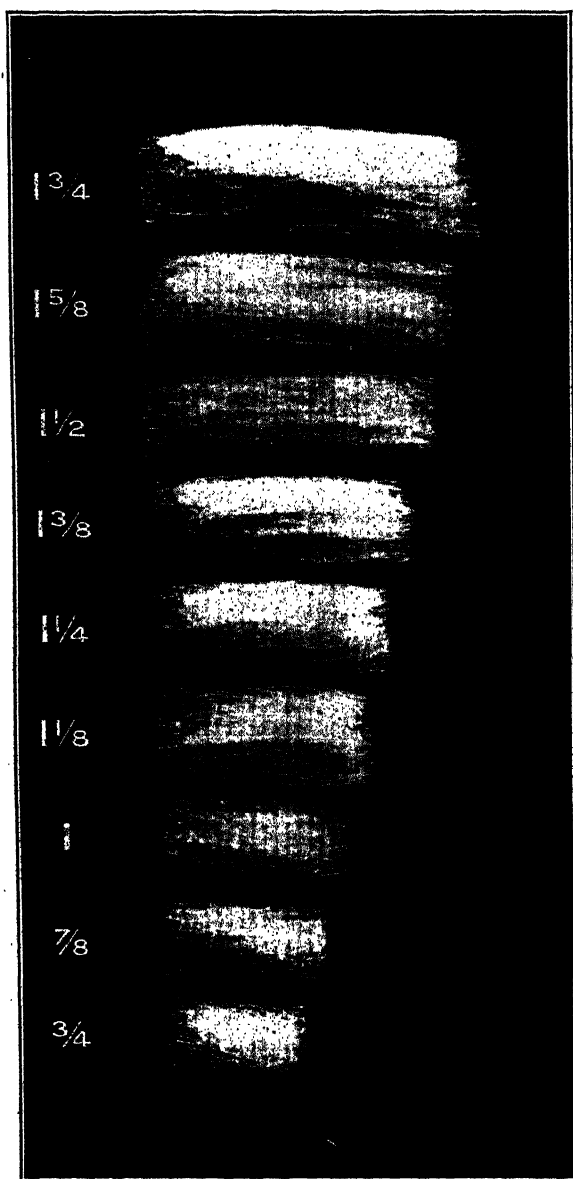


FIG. 39.—A photographic representation of the official cotton standards of the United States of those lengths of staple for which types are available for distribution, each respective length as shown being obtained from the original type bale.

also been sold into practically all the foreign markets. (See Fig. 38.)

*Bolly cotton.*—In the western and northwestern sections of the Cotton Belt large quantities of bolls, more or less matured, are frequently caught by early frosts which kill the plants and arrest the further development of the fibers. Such of these bolls as are not too severely damaged crack open and produce a cotton of poor character, fluffy and soft, and filled with shale, or the finely divided smooth inner surface of the carpel, which adheres closely to the fibers and causes waste during spinning. So much of such cotton has been caught by frosts in recent years that steps have been taken to salvage as much as possible. These frost-opened bolls are gathered and put through machinery which first picks the cotton from the bolls and then gins the cotton. The lint thus obtained is known as "bolly cotton" and brings only a fractional part of the price of well-matured white cotton.

*Snaps.*—Recently still another type of cotton has appeared in the West. It is known as "snaps," and its name is significant of its character. Owing to labor shortages, fields of mature cotton are sometimes left unpicked until late fall or winter. It is then much easier, especially if the weather be cold, to snap the bolls off of the plants than to pick the cotton. The "picking" is done later by machinery, and the cotton is then ginned and baled in the usual manner. While this cotton is fully matured, it is likely to be discolored and trashy. Snaps or snapped cotton also brings a lower price than regular cotton, but its spinning value is above that of bolly cotton.

#### Linters.

All cultivated varieties of cotton, with the exception of Sea Islands and some Egyptians, produce two types of fibers on their seed coats—a long fiber suitable for spinning and a short, somewhat weaker, fiber usually called fuzz. The long fibers are removed and baled at the gins and constitute the cotton of commerce, while the short fibers, or fuzz, are removed in a second and more intense ginning known as "delinting" or "cutting" and constitute what are known as linters. Delinting is generally done at cotton-oil mills as a step in the preparation of the seed for crushing. Linters also contain varying amounts of the long fibers that have escaped

through the gins without being removed. Linters are packed in bales similar to the ordinary cotton bale and weigh on an average about 500 pounds to the bale. The production of linters has increased from 114,000 bales in 1899-1900 to 440,000 bales in 1920-21. In 1916-17, during the World War, 1,331,000 bales of linters were cut, to be used chiefly in the production of explosives. The annual production of linters during the last 20 years, together with the ratio of linter production to cotton production, is shown in the accompanying table:

*Annual production of linters.*

| Year.          | Bales of linters. | Per cent of cotton crop. | Year.        | Bales of linters. | Per cent of cotton crop. |
|----------------|-------------------|--------------------------|--------------|-------------------|--------------------------|
| 1899-1900..... | 114,000           | 1.2                      | 1910-11..... | 398,000           | 3.2                      |
| 1900-1901..... | 143,000           | 1.4                      | 1911-12..... | 556,000           | 3.4                      |
| 1901-2.....    | 166,000           | 1.5                      | 1912-13..... | 602,000           | 4.2                      |
| 1902-3.....    | 196,000           | 1.8                      | 1913-14..... | 629,000           | 4.2                      |
| 1903-4.....    | 195,000           | 1.9                      | 1914-15..... | 856,000           | 5.3                      |
| 1904-5.....    | 245,000           | 1.7                      | 1915-16..... | 931,000           | 8.3                      |
| 1905-6.....    | 230,000           | 2.0                      | 1916-17..... | 1,331,000         | 10.9                     |
| 1906-7.....    | 322,000           | 2.3                      | 1917-18..... | 1,126,000         | 10.0                     |
| 1907-8.....    | 268,000           | 2.3                      | 1918-19..... | 929,000           | 7.7                      |
| 1908-9.....    | 346,000           | 2.5                      | 1919-20..... | 608,000           | 5.4                      |
| 1909-10.....   | 313,000           | 2.9                      | 1920-21..... | 440,000           | 3.3                      |

*Uses of linters.*—During war time linters are used chiefly in the manufacture of explosives, but during peace time the felting quality of linters and the chemical composition of the fibers are utilized in the manufacture of a variety of articles, as shown in the following list:

Batting.  
Wadding.  
Stuffing material for:

Pads.  
Cushions.  
Comforts.  
Horse collars.  
Mattresses.  
Upholstery.

Absorbent cotton.  
Mixing with shoddy.  
Mixing with wool in hat making.  
Mixing with lamb's wool for fleece-lined underwear.

Felt.

Low grade yarns:

Lamp and candle wicks.  
Twine.  
Rope.

Low grade yarns—Continued.

Carpets.

Cellulose:

Writing paper.

Gun-cotton, nitro-cellulose.

Pyrocellulose.

Smokeless powder.

Pyroxylin.

Varnishes—

Coating for metals.

Artificial leather.

Weatherproofing.

Plastics—

Celluloid.

Collodion.

Varnishes.

Artificial silks.

Photographic films.

## Cotton Markets.

A cotton market may be defined as a place where a number of men meet to buy and sell cotton. The system begins with the village or town where dealer meets producer and ends with the point where dealer delivers to spinner. The trading may be in actual cotton or in contracts for future delivery. The term "spot cotton" is used to designate actual cotton on the market, and a "spot market" is one dealing

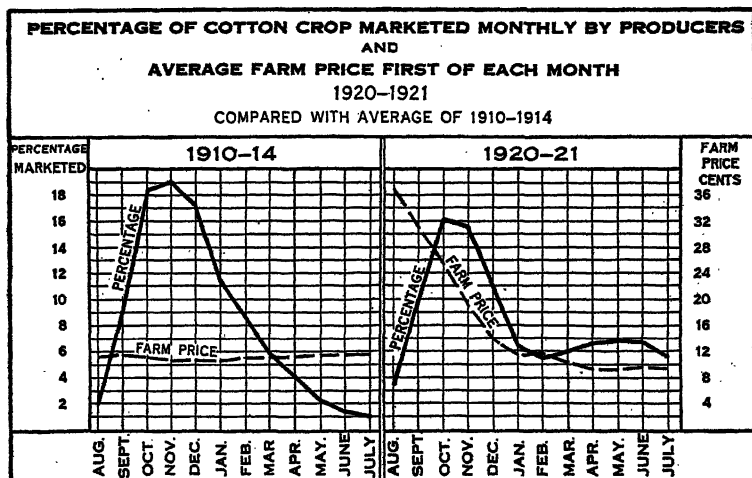


FIG. 40.—A large proportion of the cotton crop is annually marketed September to January, inclusive. This heavy marketing ordinarily depresses the farm price, which rises slowly as the marketing diminishes. Last year (1920-21) deflation, business depression, and a large carry-over of stocks caused the farm price to fall almost continuously from August to May of the following year.

in spot or actual cotton. In the future markets the trading is done in contracts to deliver at some future date. A future contract usually calls for 100 bales or approximately 50,000 pounds of cotton to be delivered during a specified future month.

*Spot markets.*—The spot markets are classified, according to their location and their functions in cotton trading, as primary and interior markets.

Primary markets are villages and towns where baled cotton is first put on the market and sold by the producer. Cotton buyers go into almost every village and town where a ginnery is to be found.

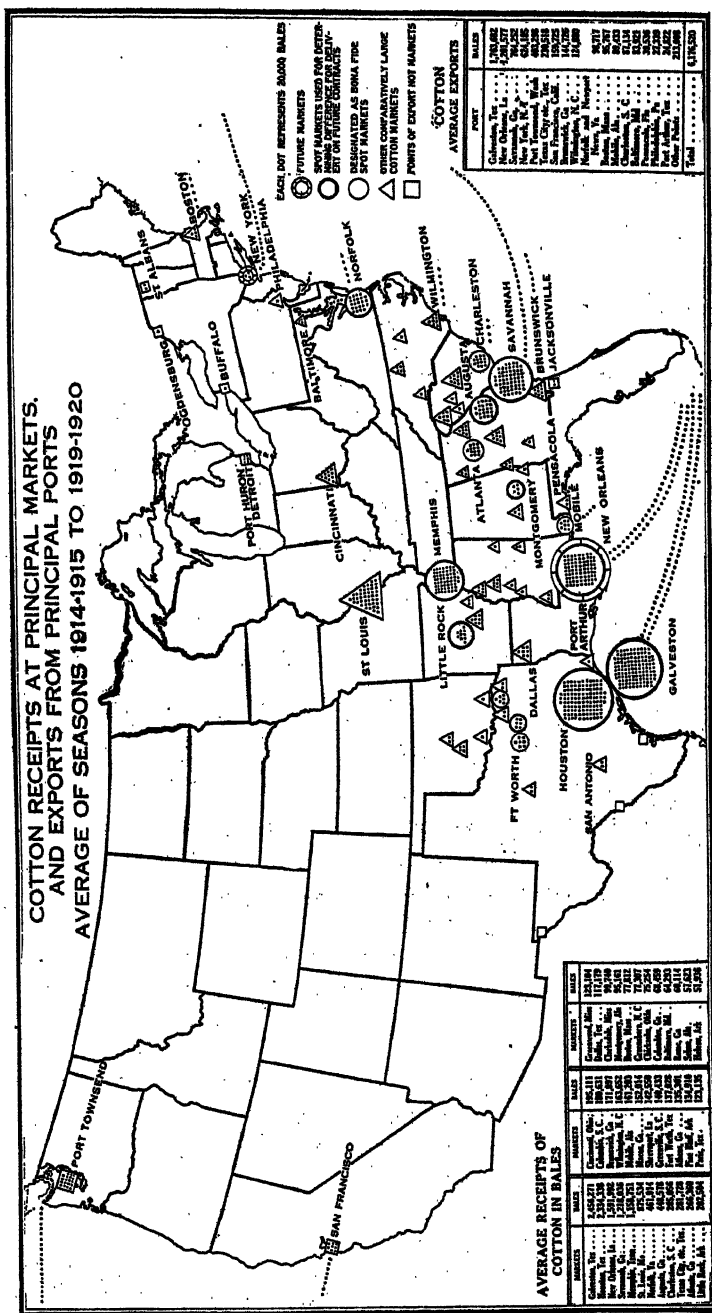


FIG. 41.—Cotton markets are "spot markets" to the extent they deal in actual cotton on hand. New York and New Orleans are also future markets, the former dealing principally in "futures." Galveston, New Orleans, and Savannah are the most important export points.

Interior markets are large towns and cities where cotton from primary markets is received and sold by primary buyers to merchants or mill agents. Such markets are usually the points of concentration for grading, compressing, assembling in commercial lots, and consigning to destination for consumption.

*Export markets.*—The cities along the Atlantic and Gulf coasts where cotton is sold and from which it is exported are called export markets. About one-half of the American cotton crop is exported for consumption in foreign mills.

*Consuming markets.*—Cities or towns in which cotton is purchased for manufacturing are called consuming markets. Boston, New York, and Philadelphia are both export and important consuming markets.

*Future markets.*—There are future cotton markets or exchanges in New Orleans and New York. The importance of these markets is not indicated by their receipts or exports of cotton, as much of the cotton dealt in never reaches these points. New Orleans is both a spot market and a future market, while New York is primarily a future market. Liverpool is the most important foreign future market dealing in American cotton. There are future exchanges also at Bremen and Havre which deal in American cotton. The classification of all cotton delivered on the New York and New Orleans future exchanges is now done by the United States Department of Agriculture.

#### Marketing and Prices.

All of the markets are closely connected through the operations of dealers, and the future exchanges stand at the apex of the system, the prices quoted in all the other markets generally being based on the future quotations. (See Fig. 42.) When the harvest season begins, contracts covering a large part of the cotton crop have already been made and are being dealt in daily upon the future exchanges. While dealing in futures may be used for speculation, under normal conditions its chief use is for hedging, a means of insurance against loss and also for the stabilization of prices. The spinner who has made a contract to deliver cotton goods sometime in the future orders cotton from a responsible dealer, who "hedges" against a rise in the price of cotton, generally by buying a contract for it upon a future exchange.

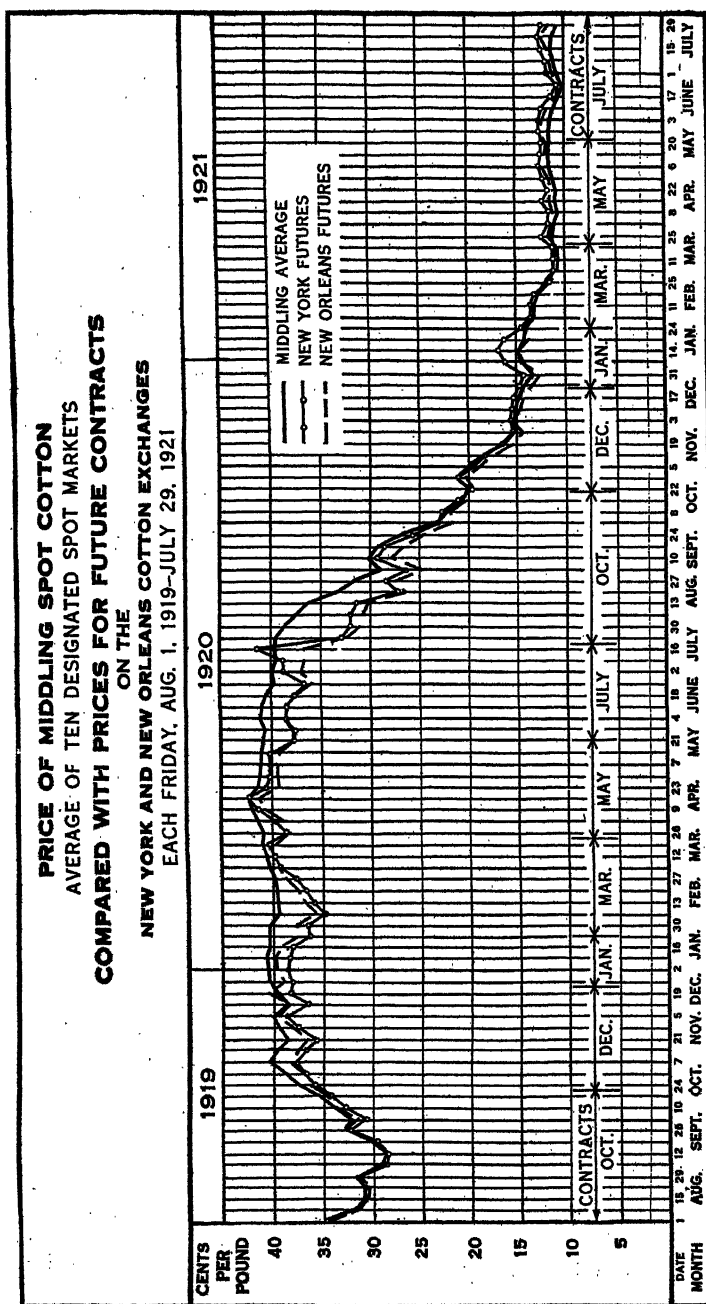


Fig. 42.—This chart shows the relation of price quotations for future contracts to the price of "spot cotton." Note that from September, 1919, to October, 1920, the spot price was nearly always higher than the future quotations, whereas from November, 1920, to July, 1921, the futures were generally above the cash.

On the other hand, the dealer who is buying or expects to buy cotton on the primary or other markets may "hedge" against a fall in prices by selling a contract for it upon a future exchange at a price sufficient to insure him against loss or even to make a profit. The purchase of cotton in quantity for any purpose without hedging would be considered such speculation that banks would not finance the deal. Dealers on the future cotton exchanges keep daily watch on the demand for cotton in all the important consuming markets and upon the conditions as to production and movement of cotton for the purpose of forecasting prices as far ahead as possible. Their forecasts guide them in their activities in buying and selling contracts for future delivery and the quotations of sales as they are made followed closely by dealers in the actual cotton on all spot markets.

*Marketing cotton.*—Buyers become active in the primary markets as soon as ginning begins. Some cotton is grown under mortgage and is sold promptly in order to meet pressing financial obligations. Where only small quantities of cotton are grown, it is usually sold to the ginner or local merchant in the nearest town or village. Through the center of the Cotton Belt the tenants on plantations, usually having pledged their crops in advance, sell at once to the owners of the plantations, or, subject to the lien, to merchants or buyers. With many producers, however, the time of selling is largely a matter of choice.

When cotton is bought in greater quantities than can be moved or consumed at once, the purchaser must bear the expense of storage and risk of loss, and he, therefore, pays the producer a lower price for it. On the other hand, the producer who can hold his crop must consider the expenses of storage, insurance, and interest on money involved in estimating the advantages of holding. It may be that in some cases the buyer can hold at less expense than the farmer and can afford to pay such a price that the farmer would lose by holding. Many successful farmers have adopted the fixed policy of selling a portion of their crop promptly and holding the remainder for sale as conditions and circumstances seem to warrant. The cotton sold under stress and of free choice soon after ginning forms a large percentage of the total crop. (See Fig. 40.)



It requires some time to assemble the cotton at the large primary and interior markets and to ship it to points of export and of consumption. Dealers move some of it as rapidly as possible, but hold some in storage at interior markets and concentration points so that they may deliver to spinners throughout the year. Spinners, as a rule, do not carry a very large supply of cotton on hand. The operations of the future exchanges enable dealers through hedging to buy and hold the cotton many months or to ship it a long distance without undue hazard from changes in prices.

*Prices.*—The basis for price quotations upon all the markets is the quotation for Middling on the nearest active future month upon the future exchanges. (See Fig. 43.) At each primary market a deduction from the price quotations must be made to cover expenses of handling and transportation. If there are many buyers on the market, grading may be fairly close and the prices paid close to the limit that will allow a reasonable profit to the buyer.

Prices in the large primary and interior markets are determined as in the smaller primary markets. However, grading has become standardized in these markets, and at each market the grades above and below Middling are settled for according to the differences prevailing in that market. The differences in price between Middling and the other grades and the premiums for the longer staples vary from time to time because of special demands or the effects of the season upon the supply of the different grades and lengths of staple.

The basis grade in future contracts is Middling and the price stated in the contracts is for that grade. When grades other than Middling are delivered the receiver pays for these grades so much above or below the contract price as the grades delivered are worth. Under the United States cotton futures act certain bona fide spot markets, designated by the Secretary of Agriculture, report daily to the future exchanges in the United States and to the Secretary of Agriculture the prevailing prices for Middling and the other grades "on" and "off" Middling (above or below Middling). New Orleans being also a spot market the differences in prices between Middling and the other grades of spot cotton in that market are used in determining the prices of cotton other than Middling when they are delivered on a

# COTTON HIGHEST AND LOWEST SPOT PRICE OF MIDDLING NEW YORK 1829-1921

CTS. 190  
PER 180  
LB. 170  
160  
150  
140  
130  
120  
110  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10

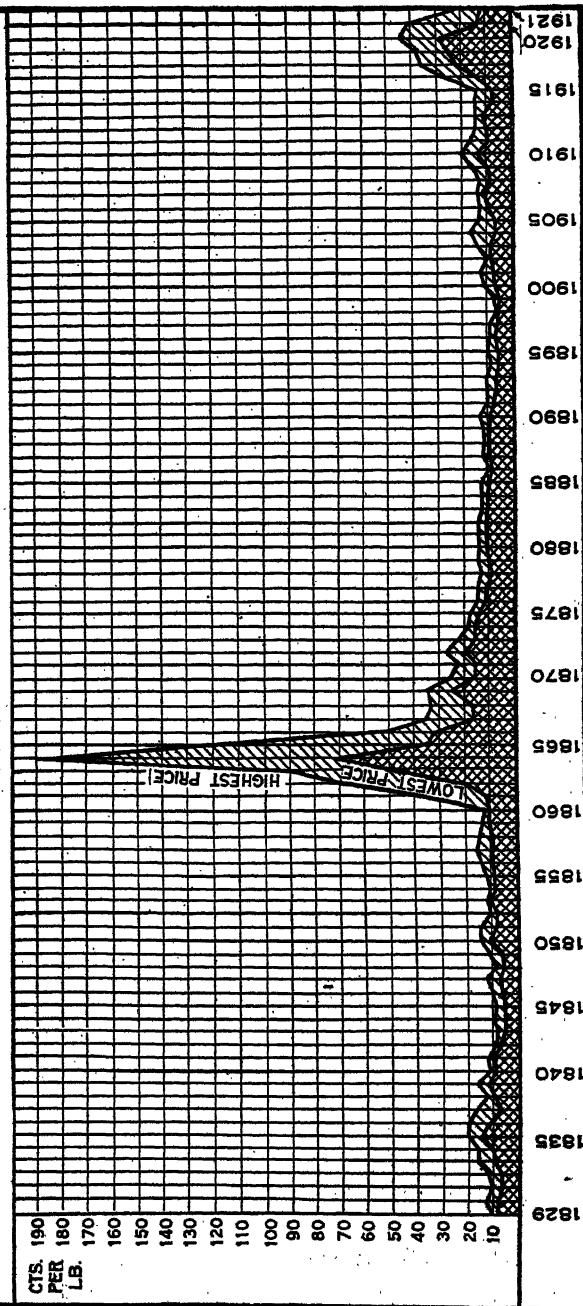


Fig. 43.—In the period of the recent war the price did not rise as high as in the Civil War period. One reason being that production continued and there was always available a good supply, whereas in the earlier period very little was produced and almost no cotton was available.

future contract in that market, whereas under the cotton futures act the New York cotton exchange uses the average differences "on" or "off" Middling as reported by the bona fide spot markets designated by the Secretary of Agriculture.

### Transportation.

On the primary markets the miscellaneous assortments of grades and lengths of staple produced by the growers of cotton are purchased and forwarded to the interior markets, where they are assorted and assembled into lots, even running as to grade and other character, and offered to the purchasing agencies of the mills. Before forwarding to the mills, however, the cotton is compressed so as to conserve freight and mill storage space and to economize on freight charges.

APPROXIMATE DIVISION OF THE LIVERPOOL VALUE OF A BALE OF COTTON  
ON JULY 1, 1913, 1918, 1920, AND 1921.

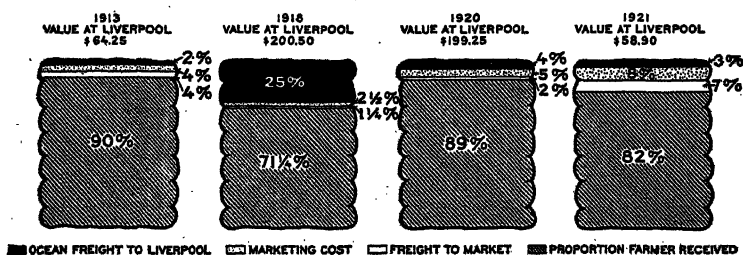


FIG. 44.—The farmer's share of the final market value of a bale of cotton varied greatly from time to time through the late war period. The cost of ocean transportation was large during the war but has shrunk nearly to the prewar share, whereas the rail transportation share has largely increased since the war.

Where there are no facilities for compressing the cotton at point of origin railroads accept it and have it compressed in transit. The charge for compressing averages about 12 cents per hundred weight. Additional charges are made for patching. These charges are added to the freight charges and collected by the railroad company. To secure through shipping rates all cotton is shipped to concentration points with reshipment privileges. When the cotton is to be re-shipped the owner surrenders his receipts and it is forwarded to destination on the rate quoted from point of origin.

## The Consumption of the Cotton Crop.

Approximately half of the crop is consumed in this country and the remainder is exported. In recent years mills in the cotton-growing States have taken more than half of the total quantity remaining in this country for consumption. Linters are mostly consumed at home. The tendencies are to expand the cotton manufacturing industries of the South and to manufacture more and more of the cotton near where it is grown.

Statistics and charts showing the annual distribution of the cotton crop of the United States follow.

*Consumption of cotton in the United States, 1896-97 to 1920-21.*

[Bales.]

| Year.       | United States. | All other States. | Cotton-growing States. | Year.       | United States. | All other States. | Cotton-growing States. |
|-------------|----------------|-------------------|------------------------|-------------|----------------|-------------------|------------------------|
| 1896-97.... | 3,472,398      | .....             | .....                  | 1909-10.... | 4,621,742      | 2,388,236         | 2,233,506              |
| 1897-98.... | 3,672,097      | .....             | .....                  | 1910-11.... | 4,498,417      | 2,249,282         | 2,249,135              |
| 1898-99.... | 3,687,253      | .....             | .....                  | 1911-12.... | 5,129,346      | 2,493,468         | 2,635,878              |
| 1899-1900.. | 3,873,165      | 2,349,997         | 1,523,168              | 1912-13.... | 5,483,321      | 2,621,578         | 2,861,743              |
| 1900-1901.. | 4,080,287      | .....             | .....                  | 1913-14.... | 5,577,408      | 2,652,114         | 2,925,294              |
| 1901-02.... | 4,187,076      | .....             | .....                  | 1914-15.... | 5,597,362      | 3,026,969         | 2,570,393              |
| 1902-03.... | 3,980,567      | .....             | .....                  | 1915-16.... | 6,397,613      | 2,870,085         | 3,527,528              |
| 1903-04.... | 4,523,208      | .....             | .....                  | 1916-17.... | 6,788,505      | 2,900,157         | 3,888,348              |
| 1904-05.... | 4,877,465      | .....             | .....                  | 1917-18.... | 6,566,489      | 2,869,391         | 3,697,098              |
| 1905-06.... | 4,909,279      | 2,535,702         | 2,373,577              | 1918-19.... | 5,765,936      | 2,566,909         | 3,199,027              |
| 1906-07.... | 4,984,936      | 2,573,943         | 2,410,993              | 1919-20.... | 6,419,734      | 2,836,815         | 3,582,919              |
| 1907-08.... | 4,539,090      | 2,351,994         | 2,187,096              | 1920-21.... | 4,892,672      | 1,895,201         | 2,997,471              |
| 1908-09.... | 5,091,534      | 2,581,321         | 2,510,213              |             |                |                   |                        |

The statistics given in the above table were compiled from reports of the Bureau of the Census. Those for the period 1896-97 to 1913-14, inclusive, are for the 12 months ending August 31. Those for the period 1914-15 to 1920-21, inclusive, are for the 12 months ending July 31. Those for the years 1896-97 to 1904-5, inclusive, except the year 1899-1900, are for equivalent 500-pound bales. Those for the year 1899-1900 and for the period 1905-6 to 1920-21, inclusive, are for running bales, except that round bales are counted as half bales and foreign cotton in equivalent 500-pound bales. Linters are included for the years 1896-97 to 1907-8, inclusive, but are excluded for the years 1908-9 to 1920-21, inclusive.

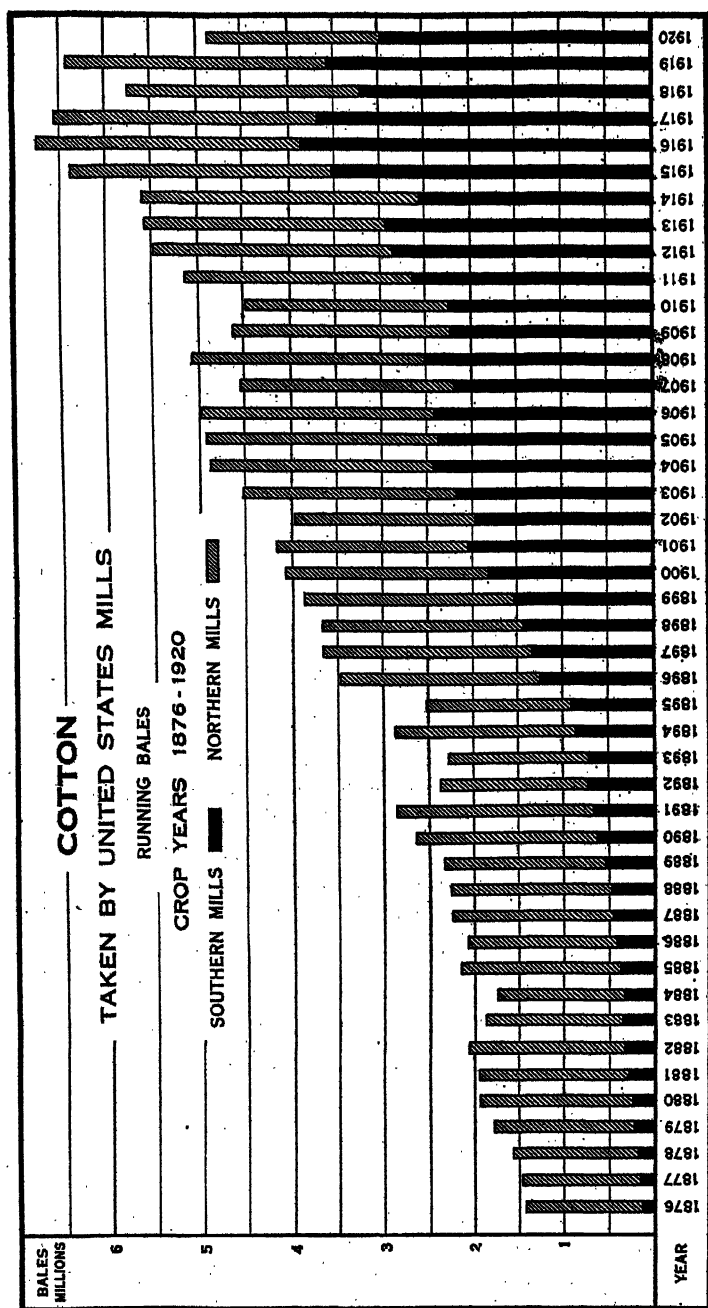


FIG. 45.—The consumption of raw cotton by the mills of the United States increased constantly from 1876 to 1916. The business depression last year caused a great reduction in mill consumption. The southern mills now use more than half the amount consumed in the United States.

The consumption of linters in the United States, by seasons, for the seasons 1908-9 to 1920-21 is given below. The figures for the seasons 1908-9 to 1913-14, inclusive, are for the 12 months ending August 31. Those for the seasons 1914-15 to 1920-21, inclusive, are for the 12 months ending July 31.

*Linters consumed.*

[Bales.]

| Year.       | United States. | Cotton-growing States. | All other States. | Year.       | United States. | Cotton-growing States. | All other States. |
|-------------|----------------|------------------------|-------------------|-------------|----------------|------------------------|-------------------|
| 1908-9..... | 149,185        | 43,584                 | 105,601           | 1915-16.... | 880,916        | 449,602                | 431,314           |
| 1909-10.... | 177,211        | 58,827                 | 118,384           | 1916-17.... | 869,702        | 446,659                | 423,043           |
| 1910-11.... | 206,561        | 79,352                 | 127,209           | 1917-18.... | 1,118,840      | 716,954                | 401,886           |
| 1911-12.... | 238,237        | 76,345                 | 161,892           | 1918-19.... | 457,901        | 291,981                | 165,920           |
| 1912-13.... | 303,009        | 98,775                 | 204,234           | 1919-20.... | 342,473        | 131,484                | 210,989           |
| 1913-14.... | 307,325        | 98,121                 | 209,204           | 1920-21.... | 516,307        | 154,483                | 361,824           |
| 1914-15.... | 411,845        | 166,384                | 245,461           |             |                |                        |                   |

*Supply and distribution of cotton in the United States.*

[Linters are included for the years 1905-6 to 1912-13, inclusive, but are excluded for the years 1913-14 to 1920-21.]

| Year.        | Supply.  |                                |                                      | Distribution.   |   |                                |
|--------------|--|--------------------------------|--------------------------------------|---|---|--------------------------------|
|              | Production, running bales, except round bales counted as half bales. | Carry over from previous year. | Imports, equivalent 500-pound bales. | Exports, running bales, except round bales counted as half bales. | Consumption, running bales, except round bales counted as half bales. | Stocks on hand at end of year. |
| 1905-6.....  | 10,656,498   | 1,934,548                      | 133,464                              | 6,763,041   | 4,909,279   | 1,349,139                      |
| 1906-7.....  | 13,097,992   | 1,249,139                      | 202,733                              | 8,503,265   | 4,984,936   | 1,514,567                      |
| 1907-8.....  | 11,527,833   | 1,514,567                      | 140,869                              | 7,573,349   | 4,539,090   | 1,236,058                      |
| 1908-9.....  | 13,418,144   | 1,236,058                      | 165,451                              | 8,574,024   | 5,240,719   | 1,483,585                      |
| 1909-10..... | 10,350,978   | 1,483,585                      | 151,395                              | 6,339,028   | 4,798,953   | 1,040,040                      |
| 1910-11..... | 12,384,248   | 1,040,040                      | 281,191                              | 7,781,414   | 4,704,978   | 1,375,031                      |
| 1911-12..... | 16,068,936   | 1,375,031                      | 229,268                              | 10,681,758  | 5,367,583   | 1,776,885                      |
| 1912-13..... | 14,159,078   | 1,776,885                      | 225,460                              | 8,800,966   | 5,786,330   | 1,048,438                      |
| 1913-14..... | 13,659,167   | 1,510,606                      | 265,646                              | 8,654,958   | 5,577,408   | 1,447,817                      |
| 1914-15..... | 15,905,840   | 1,365,864                      | 363,595                              | 8,322,688   | 5,597,362   | 3,936,104                      |
| 1915-16..... | 11,068,173   | 3,936,104                      | 420,995                              | 5,895,672   | 6,397,613   | 3,139,709                      |
| 1916-17..... | 11,363,915   | 3,139,709                      | 288,486                              | 5,302,848   | 6,788,505   | 2,720,173                      |
| 1917-18..... | 11,248,242   | 2,720,173                      | 217,381                              | 4,288,420   | 6,566,489   | 3,450,188                      |
| 1918-19..... | 11,906,490   | 3,450,188                      | 197,201                              | 5,592,386   | 5,765,936   | 4,286,785                      |
| 1919-20..... | 11,325,532   | 4,286,785                      | 682,911                              | 6,545,326   | 6,419,734   | 3,563,162                      |
| 1920-21..... | 13,270,970   | 3,563,162                      | 226,321                              | 5,673,452   | 4,892,672   | 6,590,359                      |

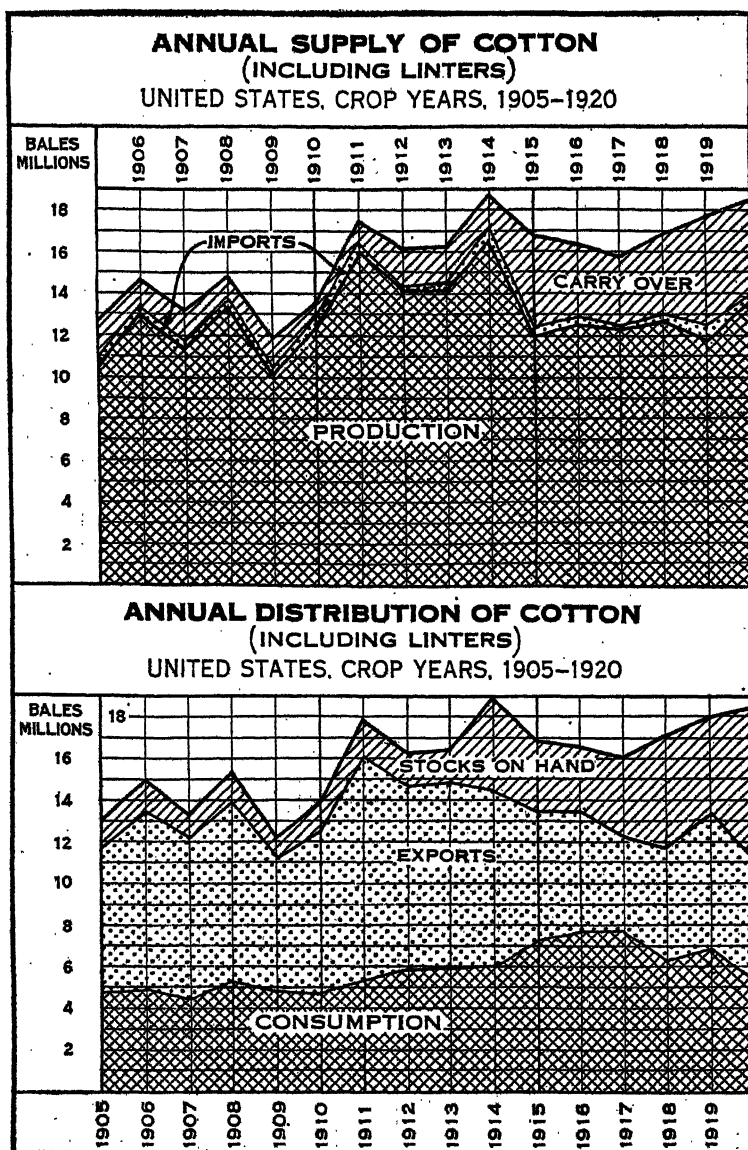


FIG. 46.—In recent years the carry-over from one crop season to another has been large. The total amount available for the year 1920-21 was greater than for any previous year except 1914-15. Before the war the United States annually exported more cotton than was consumed, but since 1914 exports have been less than home consumption.

Supply and distribution of linters in the United States.

[Figures for each season are for the 12 months ending Aug. 31, during the season 1905-6 to 1913-14, inclusive, and for the 12 months ending July 31, during the season 1914-15 to 1920-21.]

| Year.                      | Supply.  |                                |                                      | Distribution.   |   |                                |
|----------------------------|--|--------------------------------|--------------------------------------|---|---|--------------------------------|
|                            | Production, running bales, except round bales counted as half bales. | Carry over from previous year. | Imports, equivalent 500-pound bales. | Exports, running bales, except round bales counted as half bales. | Consumption, running bales, except round bales counted as half bales. | Stocks on hand at end of year. |
| 1905-6.....                | 230,497  |                                |                                      |   |   |                                |
| 1906-7.....                | 322,064  |                                |                                      |   |   |                                |
| 1907-8.....                | 268,060  |                                |                                      |   |   |                                |
| 1908-9.....                | 346,126  |                                |                                      |   | 149,185   |                                |
| 1909-10.....               | 313,478  |                                |                                      |   | 177,211   |                                |
| 1910-11.....               | 397,628  |                                |                                      |   | 206,561   |                                |
| 1911-12.....               | 556,276  |                                |                                      |   | 238,237   |                                |
| 1912-13.....               | 602,324  |                                |                                      |   | 303,009   | 137,832                        |
| 1913-14.....               | 631,153  | 137,832                        |                                      | 259,881   | 307,325   | 181,584                        |
| 1914-15.....               | 832,401  | 181,584                        |                                      | 221,875   | 411,845   | 388,786                        |
| 1915-16.....               | 944,640  | 388,786                        |                                      | 295,438   | 880,916   | 263,547                        |
| 1916-17.....               | 1,300,163  | 263,547                        |                                      | 436,161   | 869,702   | 453,659                        |
| 1917-18.....               | 1,096,422  | 453,659                        |                                      | 187,704   | 1,118,840   | 439,917                        |
| 1918-19.....               | 910,236  | 439,917                        |                                      | 71,534  | 457,901   | 868,897                        |
| 1919-20.....               | 595,093  | 868,897                        |                                      | 53,021  | 342,473   | 1,009,650                      |
| 1920-21 <sup>1</sup> ..... | 439,637  | 1,009,650                      |                                      | 51,132  | 516,307   | 684,298                        |

<sup>1</sup> Subject to possible correction.

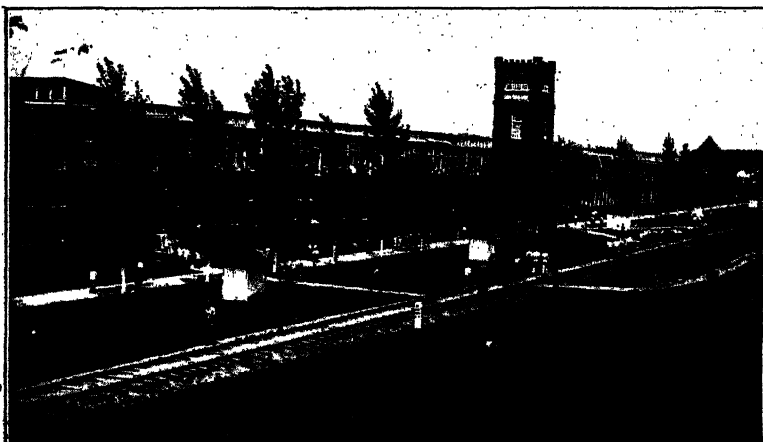


FIG. 47.—Noon hour at a modern southern cotton mill.  
90912°—YBK 1921—26



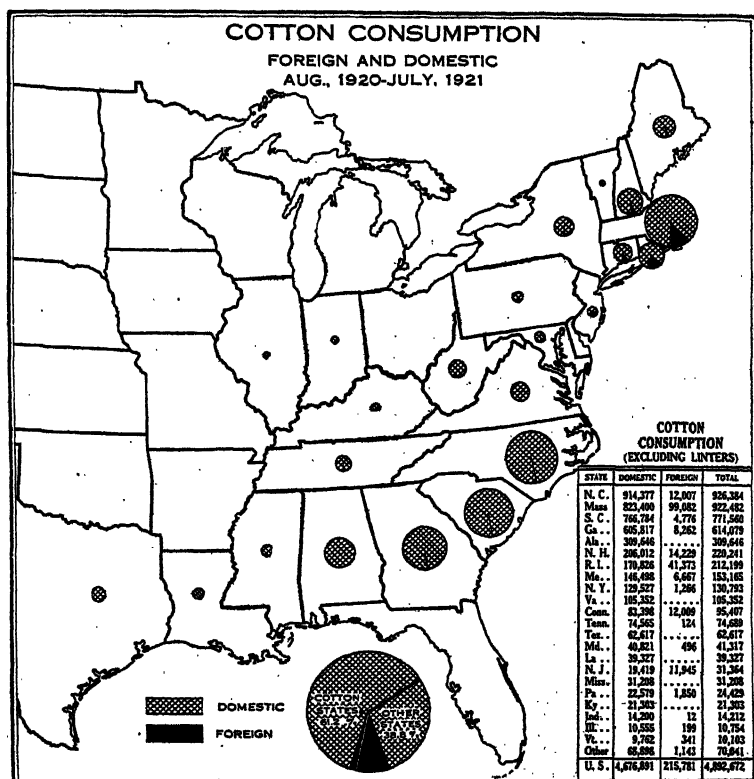


FIG. 48.—The mills in the cotton-growing States took 61 per cent of the total taken by the United States mills. Massachusetts, North Carolina, South Carolina, and Georgia are the leading States. Most of the foreign cotton was taken by the mills of New England.

#### Cotton Exports.

The average annual exports of cotton previous to the late war were about 60 per cent of the crop. During the war period the United States consumed the larger proportion of the crop produced. In some years more than one-half the crop was consumed by the mills in this country. The economic depression of last year resulted in a reduction of the mill consumption at home. Exports were also reduced, leaving an unusually large carry over, 6,590,000 bales, or one-half of the production.

The movements of cotton through ports and to foreign countries are indicated by the accompanying charts. The

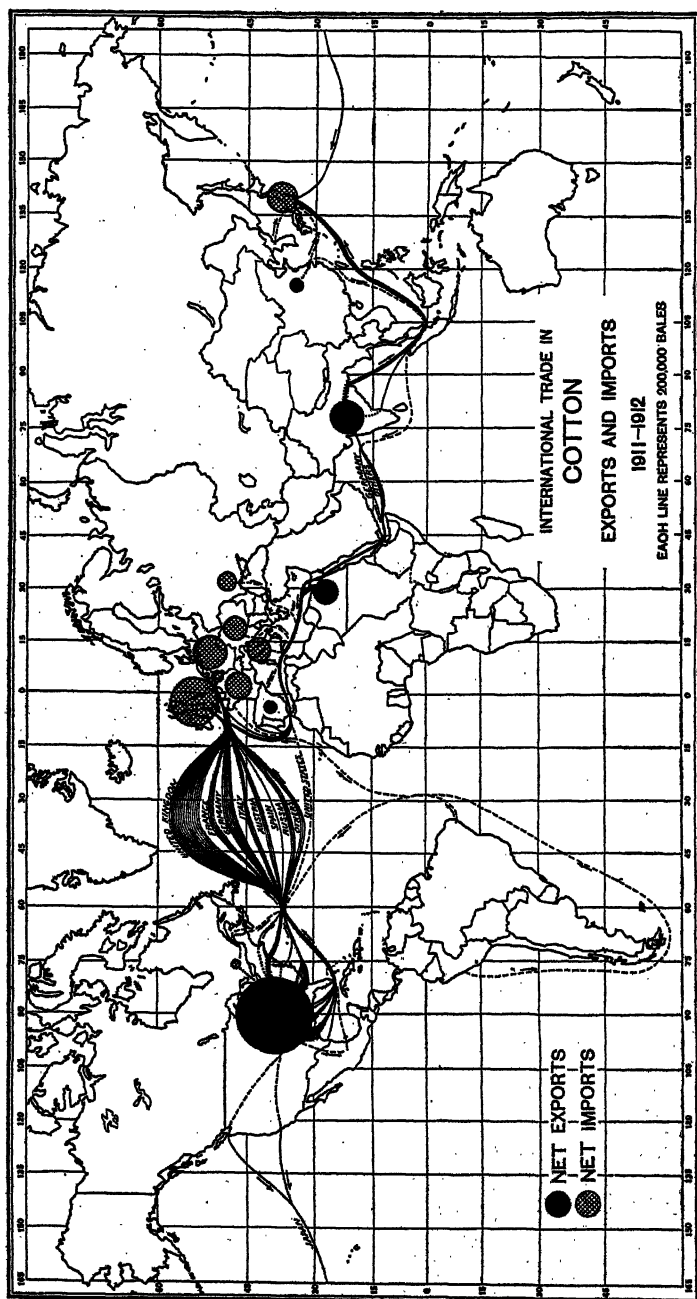


FIG. 49.—The predominant position of the United States in the international cotton trade is graphically shown in this chart.

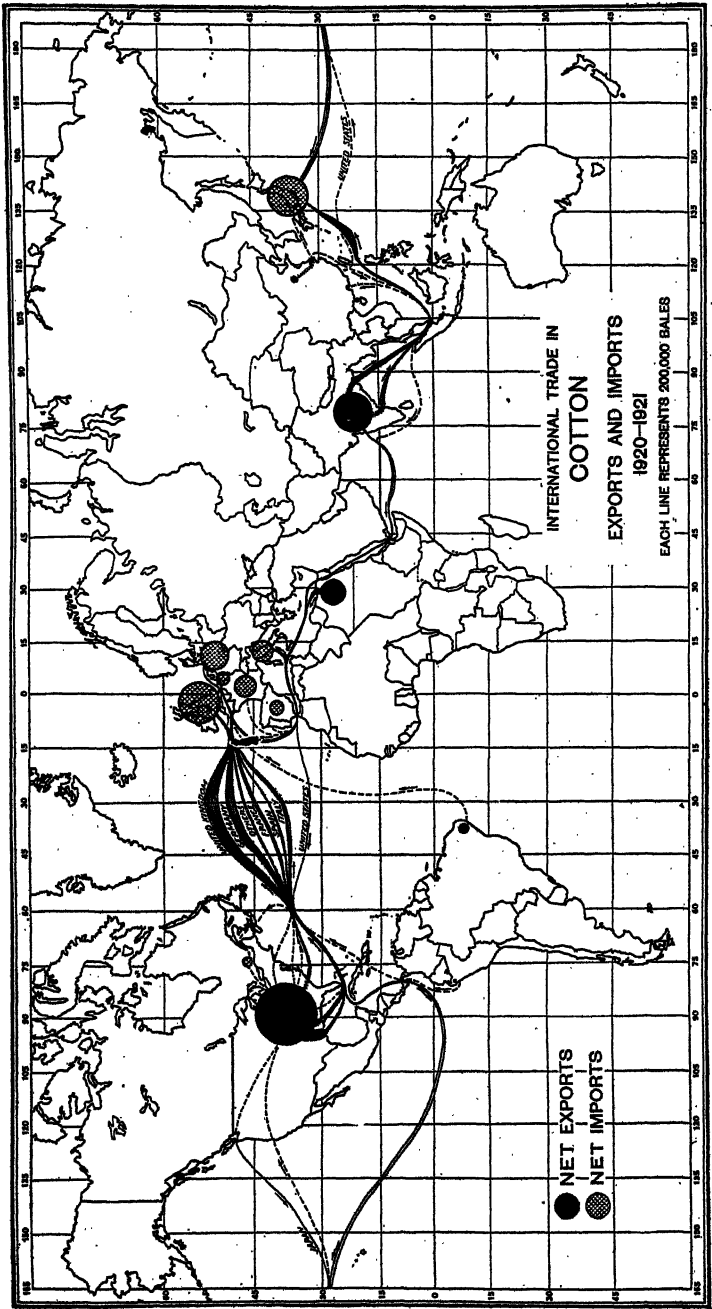


FIG. 50.—Note the changes in movements between the pre-war period and last year. Austria-Hungary and Russia were out of the market last year. Only Japan shows enlarged imports.

war disturbed cotton movements by making transportation expensive and shutting out from our markets some of the foreign countries that were taking cotton. On the other hand, in Japan there has been a great increase in the manufacture of cotton, and Japan has become one of the most important markets for the raw cotton of the United States.

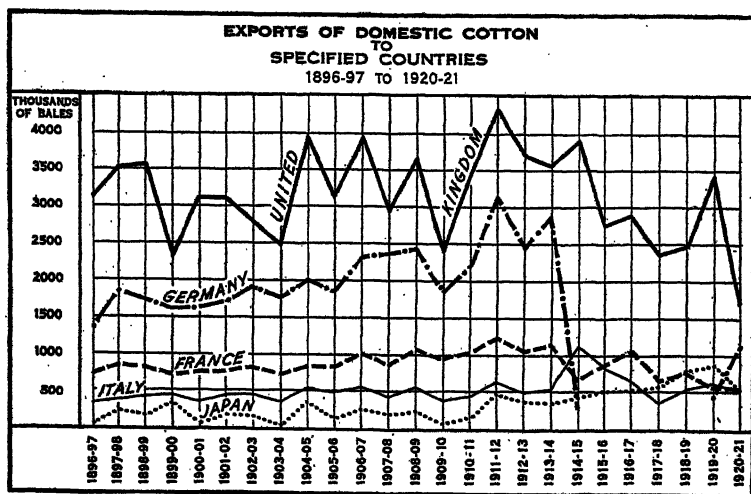


FIG. 51.—The United Kingdom is the best customer of the United States; Germany was second. Japan is becoming one of the principal importers of American cotton. In recent years there has been a very rapid expansion of manufacturing in Japan.

#### Utilization of Cotton Seed.

The utilization of the cotton seed has become an important economic factor in the production of cotton. At first planters commonly considered all of the seed as waste material, except that used for planting, but as soon as they began to give some attention to maintaining the fertility of their soils they found the seed valuable fertilizing material. Before the Civil War experiments were being made in feeding the seed to live stock and crushing it for oil. In 1859 there were seven establishments in the United States engaged in the manufacture of cottonseed products. After the Civil War there was a great demand for fertilizers in the eastern States of the Cotton Belt, and the cotton seed was almost universally used for this purpose. In 1875 refined cottonseed oil was put on the New Orleans market, and since then

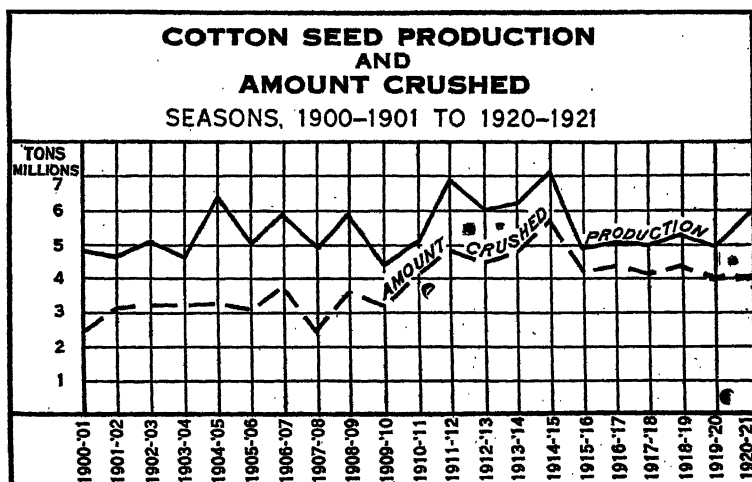


FIG. 52.—The amount of cotton seed produced, of course, varies with the cotton crop. Recently developed valuable uses for the seed products and high prices for the seed have caused an increasing proportion of the production to be crushed.

the cottonseed oil industry has developed with remarkable rapidity. Increased demand for the various products of the crushed seed has greatly increased the value of the seed.

### Deterioration in Quality of the American Cotton Crop.

According to the testimony of the cotton trade in Europe as well as in the United States, the quality of the American cotton crop has deteriorated in recent decades. This can be understood when account is taken of the general custom among the American growers of planting many different varieties in the same locality, the crossing of these varieties in the field, mixing the seed at the public gins, and the general use of this ordinary "gin-run" seed for planting.

The extent of mixing of seed at gins has not been appreciated. Recent experiments have shown that modern ginning machinery retains a large amount of seed from each customer and passes it on to the next. No less than 26 per cent of the seed delivered to the farmer at public gins, as ordinarily operated, may be seed of another variety ginned for the previous customer. It is apparent that if such seed is planted there must be a vast amount of mixing in the field, and deterioration begins.

The degeneration that results from crossing in the field no doubt is the basis for the popular idea that cotton varieties "run out" in a few years and that "fresh seed" must be brought in from other districts. The fact is, however, that locally selected seed of good varieties has proved better than the new stock and some of the best-known varieties have been grown continuously in the same districts for many years, with no indication of "running out" as long as isolation, selection, and clean ginning are maintained.

Lack of discrimination on the part of buyers in the primary markets is also a serious factor in the deterioration in quality of the American cotton crop, and failure on the part of buyers to recognize superior quality when dealing with the growers has had the natural effect of leading farmers to believe that the most desirable character that a cotton variety can have is that of giving a high percentage of lint or "large out-turn at the gin." Most of the varieties with high lint percentages produce short and inferior fiber and have small seeds, yielding a low percentage of oil, but such varieties are likely to be planted so long as the farmer receives as much for three-quarter or seven-eighths inch cotton as he does for 1-inch cotton.

#### **Danger from Foreign Competition.**

Very active efforts are already being made to establish or to extend the production of cotton in many foreign countries. Though such efforts in the past have not resulted in serious injury to the cotton industry of the United States, every season of high prices stimulates greater activity in other countries. Disturbed conditions during the war period resulted in the suspension of some of these efforts, but there is every possibility that important centers of cotton production will be developed in other parts of the world within the next few years.

Many representatives of foreign governments have come to the United States in the last few years to study the American cotton industry. They have come from Russia, China, Japan, India, the British colonies in Africa, Brazil, Argentina, Peru, and other countries. Foreign governments are also employing American experts and are purchasing large supplies of seed of improved American varieties.

The effect of such competition abroad will be felt first by the American producers of low-quality, short-staple cotton. Manufacturers in the United States had begun to import inferior cotton from India and China before the war, and though such importations may not become a regular custom, in any event they call attention to the fact that fiber of inferior quality is already being produced in foreign countries more cheaply than in the United States.

Since a large part of the American cotton crop is exported to other countries, the only adequate protection against foreign competition is to improve our own industry by growing better cotton and by growing it more cheaply than other countries are able to do, notwithstanding lower wages of farm labor.

#### Improvement Through Utilization of Better Varieties.

Fortunately the American cotton farmer is not limited to the production of inferior fiber, even under boll weevil conditions. Instead of preventing the use of better varieties of cotton, the presence of the boll weevil makes the improvement of varieties still more important than ever before. In fact, the better methods of preparing and cultivating the land made necessary by the boll weevil provide more favorable conditions for the production of superior fiber.

There is available a series of early and prolific Upland varieties of cotton-producing fiber from 1 to 1½ inches long, which are adapted to a wide range of conditions in the American Cotton Belt. With such varieties available, there are no agricultural reasons for continuing to produce cotton of less than 1-inch staple in the United States, and there does not appear to be any industrial or economic reason for continuing to produce the short and inferior fiber that now forms a large proportion of the American cotton crop.

#### Importance of One-Variety Communities.

Full utilization of improved varieties of cotton is possible only in communities devoted to the production of a single variety. Where communities are united upon a single superior variety of cotton and supplies of pure seed are maintained many of the farming problems are simplified. Cot-

ton growing is discussed with interest and profit at farmers' meetings because everybody has had experience with the same variety of cotton. With a full understanding of the behavior of one variety, methods are adjusted more closely to differences in soil, season, and time of planting, as well as to the control of insect pests and diseases, labor supplies, ginning, handling, warehousing, financing, and marketing of the crop.

The most rapid progress in American cotton culture has been made the last few years in the Salt River Valley of Arizona, where only the Pima variety of Egyptian cotton is grown. Single-variety communities are also developing rapidly in Texas, Oklahoma, California, and other States where millions of dollars in premiums have already been paid to farmers for superior cotton. Such progress is not possible in communities growing different kinds of cotton, where farmers usually ascribe their success or failure to the quality of the seed.

The essential feature is that the community should agree upon the planting of one variety of cotton and take measures for maintaining the purity and uniformity of the stock by continued selection under the local conditions. This would mean larger crops, better fiber, and higher prices, not only because of the improved quality, but also because each community would be able to produce a commercial quantity, a hundred bales or upward, of the same uniform type of cotton.

#### Cooperative Warehousing and One-Variety Communities.

Realization of the enormous benefits to be derived from cooperative warehousing of cotton has led to the rapid organization in all of the principal cotton-growing States of farmers' associations to finance the building of centralized, fire-proof warehouses for the proper storage and handling of their crop. Through such associations the farmer secures protection for his fiber from damage by fire or weather, his crop is marketed in an orderly manner, and a fair price is assured for the quality of cotton he produces.

Full benefits of such associations can not be realized, however, in communities growing many different varieties of cotton. Though the progressive farmer producing a superior



staple from selected seed may receive a premium for his cotton the first year of two, there would be no possibility of maintaining the high standard of his crop so long as his neighbors persisted in growing inferior cotton and ginning their crops on the same gin. Nor is it possible to receive a full price unless the superior fiber is available in the large commercial quantities that manufacturers require, and only one-variety communities can produce.

It is only in communities devoted to the growing of a single, superior variety and maintaining its quality and uniformity by persistent selection that full benefits may be realized from cooperative warehousing and a real improvement in the quality of the American cotton crop assured.

### Summary of the Situation and Outlook.

The short crop of 1921 plus the large carry-over from 1920 gave the world a sufficient supply of cotton for the year 1921-22. Had there not been a very large carry-over from the crop of 1920 the low production of 1921 would have resulted in very high prices for cotton. Ordinarily a short crop in the United States should result in high prices, which would in some measure offset low yields. But the extraordinarily large carry-over from the crop of 1920 resulted in low prices to farmers with a very small crop. The situation was made worse by the industrial depression, which greatly reduced the demand for cotton by the mills of the United States as well as by manufacturers in foreign countries. In addition to these difficulties the South was further oppressed by high prices for fertilizers and high prices for almost everything else that the southern farmer had to buy. Notwithstanding that corn and other farm products in the North were very cheap southern farmers had to pay good prices for these products in the South because of the increased transportation costs. Taken together all of these factors produced a severe economic depression in the South.

Of course it is not expected that these conditions will continue long. The revival of the cotton-manufacturing industry in this country is strengthening the demand for cotton. There is reason to hope that the economic condition of foreign countries will also improve, so that the cotton-manu-

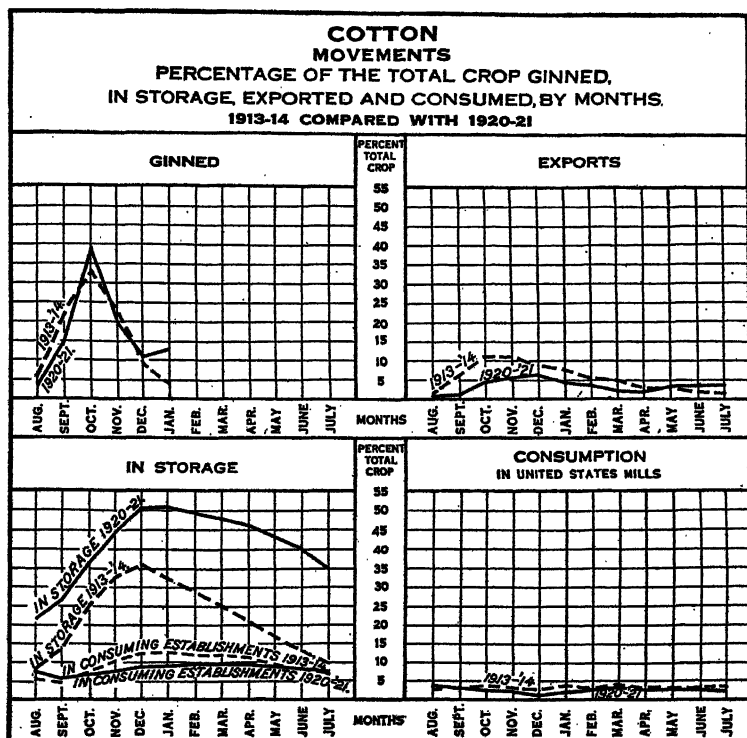


FIG. 53.—Ginning begins in July and ends in February; the amount in storage increases from August to December, inclusive; exports increase August to October or November; consumption in the United States mills is quite regular throughout the year. Movements last year differed from the pre-war average principally in the stocks in storage, which was largely owing to the unusually large carry-over from the previous year.

facturing industries will revive and the demand for goods manufactured in this country will increase. The burden upon the farmer of the South in making his purchases in the North has been somewhat lessened by a slight reduction in freight rates. Reductions in wages and in prices of things the farmer buys to produce the crop will result in a reduction in the cost of the crop. The carry-over of cotton from 1921-22 is much less than in previous years, so that unless there is a very large new crop of cotton to add to this carry-over the supply at the beginning of the year will be considerably less than the supply last year. Already the prospect for a reduction in supply and an increase in demand has resulted in better prices. The boll weevil continues

to be a very destructive pest, which there is as yet no prospect of eliminating. Farmers who have been in contact with it for some time have learned to reduce somewhat its destructiveness. Until more adequate measures of control or destruction of the pest have been developed it may be expected that the boll weevil will continue to do enormous damage to the crop from year to year, varying in destructiveness with the character of the season.

# A GRAPHIC SUMMARY OF AMERICAN AGRICULTURE

BASED LARGELY ON THE CENSUS OF 1920

By O. E. BAKER, *Agricultural Economist, Bureau of Agricultural Economics.*

## Introduction.

**F**OUR COUNTRIES are preeminent in quantity of agricultural production—the United States, Russia, China, and India—and at present the production of the United States is considerably greater than that of any other nation. The aggregate value (United States value) of the agricultural products of the Russian Empire just prior to the war was only about two-thirds that of our Nation, while the production of foods and fibers in China, which can only be guessed at, is probably also about two-thirds and certainly not over three-fourths that of the United States. The agricultural production in India is less than half that of our Nation. Only the British commonwealth of nations as a whole—India, Australia, New Zealand, South Africa, Canada, and the British Isles—approaches the United States in quantity of agricultural production, with an aggregate about nine-tenths that of the United States.

The United States is not only the leading nation in agricultural production, but also it leads all nations in exports of agricultural products. The teeming populations of China and India require practically all the food produced and most of the fiber for home consumption, but in normal times Russia has ranked with the United States in value of agricultural exports. War, revolution, and crop failure, however, have transformed Russia into a nation unable to feed its own people. Since the war the value of agricultural exports from the United States has exceeded the aggregate value of those from all other nations in the world. Yet the agricultural exports of the United States at present are only one-eighth of its production.

This vast agricultural production of the United States requires the labor of about one-quarter of our gainfully employed population, whereas 85 per cent of the population of Russia is classed as agricultural, and probably three-fourths of the people of China and of India derive their support from agricultural pursuits. Six and a half million farmers in the United States, assisted by a somewhat

smaller number of farm laborers, probably less than 4 per cent of the farmers and farm laborers of the world, produce nearly 70 per cent of the world's corn, 60 per cent of the world's cotton, 50 per cent of the world's tobacco, about 25 per cent of the world's oats and hay, 20 per cent of the world's wheat and flaxseed, 13 per cent of the world's barley, 7 per cent of the world's potatoes, and 5 per cent of the world's sugar, but only about 2 per cent of the world's rye and rice. Totalling the cereals on the basis of tons, and estimating the production of China as somewhat larger than that of India, it appears that the United States produces about one-fourth of the world's cereal crops. The average production of cereals per person engaged in agriculture in the United States is 12 tons, while for the rest of the world it is only about 1.4 tons.

Nevertheless, the agricultural production of the United States is no longer keeping pace with our increasing population. The peak of production per capita of the total population was reached about 1906 or 1907, and although the decrease in per capita production since has been very slow and is yet very small, it is clearly apparent. This failure of agricultural production to increase as rapidly as population is not due primarily to the decrease in the proportion of our population engaged in agriculture from over 13 per cent in 1910 to about 10 per cent in 1920, according to the census returns<sup>1</sup>, for the acreage of crops per person engaged in agriculture was, apparently, 25 per cent greater in 1920 than in 1910; but, instead, is owing mostly to a notable decrease in the rate of expansion of our arable area. Improved land increased only 5 per cent from 1910 to 1920, as compared with 15 to 50 per cent in previous decades, and this 5 per cent increase was practically confined to the precariously productive semi-arid lands of the Great Plains region. The land in the United States suitable for agricultural use without irrigation, drainage, or heavy fertilization is nearly all occupied. Consequently, one of the great questions before the American people is how to maintain the supply of foods and fibers for the increasing population at that high level to which we are accustomed,—should we cultivate the present area of arable land more intensively, or, like England, depend upon imports from foreign countries, or should the Nation embark upon extensive projects of reclamation?

The first part of this Graphic Summary of American Agriculture, therefore, is devoted to a series of maps visualizing in a very generalized way the agricultural regions of the United States, and the

<sup>1</sup> However, as the 1920 census was taken January 1 and the 1910 census was taken April 15, it appears likely that a large number of farm laborers were missed by the enumerators in 1920. Making allowance for this discrepancy, it seems probable that the acres of crops per person engaged in agriculture increased at least one-sixth between 1910 and 1920, and the production even more.

topographic, climatic, and soil conditions which determine these regions; also the location and extent of the land available for reclamation by irrigation, by drainage, and by clearing of forest growth. This first part is concluded by two graphs, one outlining the trend of land utilization in the past, and the other venturing to set limits to the expansion of our arable area in the future. (See Figs. 2 to 18.)

The second part of this study shows the geographic distribution of 50 crops in the United States, according to the census of 1920. For corn, wheat, and cotton both acreage and production are shown; but for other crops acreage only, since acreage affords a better comparison than production of the relative importance of the crops in a region. The total area in crops in 1919 was about 370 million acres, an increase of 50 million acres since 1909. This increase of 13 per cent in crop acreage, as compared with 5 per cent in improved land, indicates that patriotic motives, supported by the high prices paid for farm products during the war and for some time afterward, caused the plowing up and planting to crops of much improved pasture. The trend of land utilization in the United States is toward the more intensive use of the more fertile or favorably situated land—that is, its use for crops; and toward the less intensive utilization of the less fertile or less favorably situated land—that is, its use for pasture and forest. (See Figs. 19 to 71.)

The third part of this article consists of a series of 24 maps showing the geographic distribution of the several kinds of live stock, total and purebred only; also of the production of butter and cheese, wool and mohair. Fully three-fifths of the crop acreage in the United States is used to produce feed for farm animals, or about 225 million acres; and, in addition, our live stock consume the product of about 65 million acres of improved pasture, probably of 150 million acres of unimproved grassland pasture in farms, and 175 million acres of woodland pasture in farms and in our national forests, besides that of perhaps 500 million acres of arid or semi-arid open range land in the West. It seems safe to say that live stock consume two-thirds of the product of the improved land and practically all the product of the unimproved pasture, or fully 80 per cent of the total food and feed produced by tame and wild vegetation in the United States. (See Figs. 72 to 96.)

The last part of this study considers the farm as a whole—the variations in size and value in different portions of the United States; the expenditures for labor, feed, and fertilizer; ownership and tenancy; and, finally, the geographic distribution of country, village, and city populations. Four small maps also are provided, showing the number of farmers having automobiles, tractors, telephones, and running water in the house, as reported by the census

for January 1, 1920. American farms, in general, are different from those in other countries of the world, except Canada, Australia, and South Africa. English farms differ from American farms in that they are nearly all operated by tenants and employ more hand labor. The peasant farms of continental Europe utilize agricultural machinery still less and are much smaller in size than most American farms. The farms of India, China, and Japan are still smaller and are cultivated with only the crudest tools. There are 28 to 30 acres of crops per person employed in agriculture in the United States, as compared with 9 in Russia prior to the war, 7 in France and Germany, and  $1\frac{1}{2}$  in Japan. (See Figs. 97 to 124.)

The American farm involves a large investment of capital. This investment is increasing and must increase if the American farmer is to improve his standard of living. The average value of farms in the United States was \$6,444 in 1910, and \$12,084 in 1920. In Iowa, the average value of the farms in 1920 was \$39,941. The area of the crops per farm in the United States increased from 50 acres in 1909 to 57 acres in 1919. Our farmers are driving larger teams, using more efficient machinery, producing more per acre and per person than ever before. Each American farmer and farm laborer, on the average, is feeding nine people other than himself in this country, and one more person living in foreign lands. It is in this increasing productivity of the American farm, amounting probably to 15 per cent in the last decade, that the expenditure for scientific research, for technical education, and for improved economic organization in agriculture finds its justification.

This semicapitalistic American farm, however, is not organized like a factory. The one farm laborer per farm, on the average, is often the farmer's son, or a neighbor's, who eats at the same table with the farmer and expects some time to have a farm of his own. Corporate or communal agriculture is, in general, a failure in the United States. The family farm is practically the universal type. To keep this American farm large enough to support a family according to the American standard of living and supplied with sufficient machinery and working capital for efficient operation is important not alone to our agricultural but also to our national welfare. The characteristic and precious feature of American agriculture is its large production per man, and during the past decade the increase in the productivity of our farms was greater than in any decade preceding. But as population increases and poorer and poorer land is brought into use for crops—that is, as labor becomes more abundant and land becomes scarcer—it appears probable that larger production per acre will become more profitable than greater production per man, and that our agriculture, as well as our standard of living, will more and more resemble that of Europe before the war.

## List of Maps and Graphs.

### I. THE PHYSICAL CONDITIONS AND USE OF THE LAND.

|  | Page.    |
|--|----------|
| Agricultural regions of the United States.....                     | 413-416  |
| Topography (photograph of land relief model of United States)..... | 417      |
| Average annual precipitation and length of frostless season.....   | 418, 419 |
| Soil regions and vegetation regions.....                           | 420, 421 |
| Land in farms, improved land, and land in crops.....               | 422-424  |
| Improved and unimproved pasture.....                               | 425      |
| Forest and cut-over land, total and potentially agricultural.....  | 426, 427 |
| Wet land needing drainage; irrigated and irrigable land.....       | 428, 429 |
| Use of the land, and trend in population and food production.....  | 430, 431 |

### II. THE CROPS.

|   |          |
|---|----------|
| Relative importance of the crops and value of all crops.....  | 432, 433 |
| Cotton acreage and production.....  | 434      |
| Corn for grain, acreage, production, amount sold; corn for silage and<br>for forage, acreage.....   | 435-437  |
| Wheat acreage, winter and spring, and total production.....   | 438-440  |
| Oats, barley, rye, buckwheat, and velvet beans, acreage.....  | 441-444  |
| Kafir, milo, and other sorghums for grain and for forage, acreage.....                              | 444, 445 |
| Flax, rice, and tobacco, acreage.....   | 446      |
| Hay and forage, total acreage.....  | 447      |
| Timothy, clover, alfalfa, and wild hay, acreage.....  | 448-452  |
| Miscellaneous tame grasses, grain hay, and legume hay, acreage.....                                 | 452, 453 |
| Field peas, field beans, and peanuts, acreage.....  | 454, 455 |
| Potatoes, and sugar crops (beets, cane, sorghum), acreage.....                                      | 456, 457 |
| Vegetables for home use, value; and vegetables grown for sale, acreage.....                         | 458, 459 |
| Cabbage, cantaloupes, and watermelons, acreage.....   | 460, 461 |
| Green peas, sweet corn, and tomatoes, acreage.....  | 461, 462 |
| Total fruits and nuts, approximate acreage.....   | 463      |
| Apples, approximate acreage, production, and amount sold.....                                       | 464, 465 |
| Peaches, plums and prunes, grapes, citrus fruits, and pears, approximate<br>acreage.....            | 466-468  |
| Pecans, almonds and walnuts, strawberries, bush fruits and cranberries,<br>approximate acreage..... | 468, 469 |

### III. LIVE STOCK.

|  |         |
|--|---------|
| Relative importance of the farm animals, United States and 20 States..                   | 470     |
| Horses and mules, colts and work stock; purebred saddle and draft<br>horses, number..... | 471-474 |
| Cattle, total number; beef, dairy, and purebred, number.....                             | 475-478 |
| Dairy products, total receipts from sales; quantity of butter and cheese<br>made.....    | 479-482 |
| Swine (hogs and pigs), total and purebred, number.....                                   | 483-484 |
| Sheep, total and purebred, number; goats, number; value of wool and<br>mohair.....       | 484-486 |
| Poultry, number.....   | 487     |
| Bees, number of colonies.....  | 488     |



## IV. THE FARMS AND THE PEOPLE.

|  | Page.    |
|--|----------|
| Number of farms, total and of classified sizes.....  | 489, 490 |
| Average acreage of improved land per farm.....   | 491      |
| Value of farm land per acre.....   | 492      |
| Value of farm property, and of buildings, machinery, and live stock.....   | 493-495  |
| Expenditures for feed, fertilizer, and labor.....  | 495, 496 |
| Average value of farms.....  | 497      |
| Relative importance of tenancy from standpoints of proportion of the farms, of the improved land, and of the value of farm property operated by tenants..... | 498, 499 |
| Number of farms operated by white and negro owners and tenants.....  | 500, 501 |
| Country, village, and city population.....   | 502, 504 |
| Farms having tractors, automobiles, telephones, and water piped into the house.....  | 505, 506 |

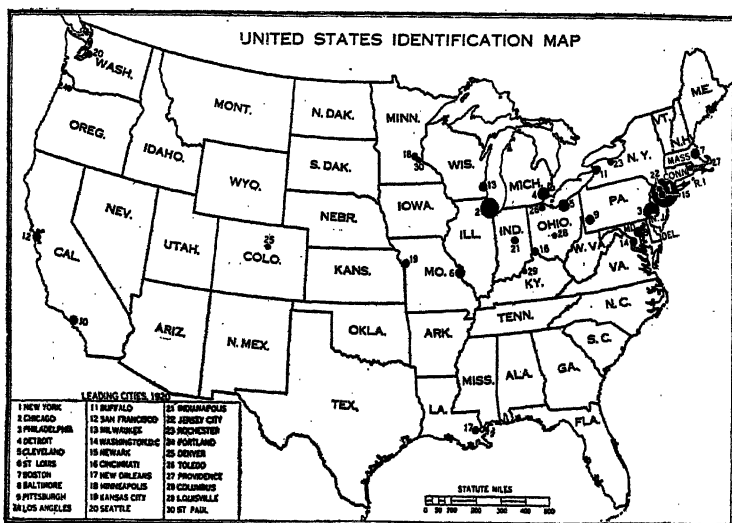


FIG. 1.—This map should be used in connection with all the maps that follow when it is desired to determine the name of a State. The succeeding maps do not show State names, because the letters would interfere with the dots or shading, but the State boundaries are shown and the shape of these boundaries, or location of the State on the map, should be compared with this map to identify the State. The map also shows the location of the 30 largest cities, the names corresponding to the numbers being given in the lower left-hand corner of the map.

## The Agricultural Regions.

The United States may be divided into an eastern and a western half, characterized, broadly speaking, one by a sufficient and the other by an insufficient amount of rainfall for the successful production of crops by ordinary farming methods. The North Pacific coast and several districts in California and in the northern Rocky Mountain region constitute exceptions to this statement. The transition zone which separates the East from the West lies, in general, along the one hundredth meridian, the average annual precipitation increasing in this zone from about 15 inches at the Canadian boundary to 25 inches in southern Texas, where the evaporation is much greater and the rainfall more torrential. The East is a region of humid climate farming, based upon tilled crops, small grains, and tame hay and pasture; the West, of wild hay and grazing, dry farming, winter crops in certain localities, and irrigation farming, with only limited areas of ordinary farming under humid conditions such as characterize the East.

The East and West may each be divided into six agricultural regions. In the East, precipitation being usually sufficient, the classification is based largely on temperature and the crops grown, while in the West rainfall and topography are the important factors. In the East the agricultural regions extend for the most part east and west, following parallels of latitude; while in the West the regions are determined by the mountain ranges and extend north and south. Agriculture in the East varies primarily with latitude and soils, but in the West the principal factors are altitude and rainfall. The average elevation of the eastern half of the United States is less than 1,000 feet; that of the western half, over 4,000 feet. (Compare Fig. 2 with Figs. 3 to 16.)

In the East corn is the leading crop, constituting over one-quarter of the acreage and nearly 30 per cent of the value of all crops. It is grown in all the six eastern regions, but is dominant in the Corn Belt, and is very important in the Corn and Winter Wheat Region, and in the Cotton Belt. Along the Gulf of Mexico and the southern Atlantic coast the type of agriculture varies greatly from section to section—from rice farming to sugar cane growing and winter vegetable production, citrus fruit orcharding, and cattle ranching—so that the region is not named after any crop, but is called the "Subtropical Coast," because the warm water exerts a controlling influence upon climate and crops. In this eastern half of the United States there is scarcely any cotton grown outside the Cotton Belt, very little winter wheat outside the Corn and Winter Wheat Region and adjacent portions of the Corn Belt and Cotton Belt, and prac-

tically no spring wheat outside the Spring Wheat Region. Grass is of greatest importance in the Hay and Pasture Region, where in nearly every county hay and pasture occupy half or more of the improved land. (Compare Fig. 2 with Figs. 21 to 71.)

In the West hay is the leading crop, contributing nearly 37 per cent of the acreage and 26 per cent of the value of all crops in 1919, and the forage obtained by grazing is probably of almost equal value. Alfalfa is the leading hay crop in the Rocky Mountain and Arid Intermountain regions, wild grasses in the Great Plains Region, and grains cut green on the Pacific coast. Wheat contributed 21 per cent of the value of all crops, oats 3 per cent, barley 3 per cent, fruit and nuts 18 per cent, potatoes 4 per cent, and other vegetables 8 per cent in these six western regions. The value of all crops in the western regions, however, constituted in 1919 only 15 per cent of the total for the United States. (Compare Fig. 2 with Fig. 21.)

The contrast between the East and West is not as pronounced in live stock as in crops, except that swine are largely confined to the East, while sheep are much more important in the West. There is a marked distinction, however, in the manner of management, the live stock in the East being fed in the barnyards or fields with shelter at night, while in the West the stock is mostly grazed on the open range. In the East, the Hay and Pasture Region is primarily a dairy area; while the Corn Belt is the center of the beef-cattle and swine industry. In the West, the sheep are generally located in the more arid and the cattle in the less arid areas; while in the North Pacific Region, with its cool, moist climate, similar to that of the Hay and Pasture Region, dairying is again the dominant live-stock industry. (Compare Fig. 2 with Figs. 74 to 96.)

The farms, or "ranches," in the West are, in general, much larger in area than in the East. Owing to the low rainfall in the West, except in the North Pacific Region, the land outside the irrigated and dry-farming districts is used mostly for grazing, and instead of 80 or 160 acres being sufficient to support a family, as in the East, 2,000 to 4,000 acres, or more, are commonly required. In the dry-farming areas half sections of land (320 acres) and sections (640 acres) are normal size farms. In the irrigated districts the farms are no larger in area than in the East. The 80 or 120 acre irrigated farms, however, are often worth as much as the 640-acre dry farms or the 3,000-acre stock ranches. (Compare Fig. 2 with Figs. 97 to 111.)

A larger proportion of the farms in the West are operated by their owners than in the East, owing, doubtless, to the cattle ranching, the more recent homestead settlement, and the larger proportion of fruit farms. The proportion of farms operated by tenants in the western regions ranges from 13 to 23 per cent, except in the Cali-

ifornia-Arizona Desert, where irrigated cotton farming increases the proportion to 33 per cent. In the East, on the other hand, over 30 per cent of the farms in the Corn and Winter Wheat Region are operated by tenants; in the Corn Belt over 40 per cent; and in the Cotton Belt over 60 per cent, owing in part to the plantation system and the large negro population. The Subtropical Coast and the Hay and Pasture regions, however, have only 27 per cent and 16 per cent, respectively, of the farms rented to tenants. (Compare Fig. 2 with Figs. 112 to 117.)

The geographic distribution of the rural and urban population is particularly interesting. The rural population is densest in the Cotton Belt, where cotton cultivation and picking require large amounts of hand labor and the acreage per laborer is small; also in the eastern portion of the Corn and Winter Wheat Region, where the rolling to hilly lands and lack of capital discourage extensive use of machinery. The rural population is much thinner in the Corn Belt and the Spring Wheat Region, and is thinnest in the West, except in the irrigated districts and the Pacific coast valleys. Urban population, on the other hand, is concentrated largely in the Hay and Pasture Region of the Northeastern and Lake States, where large manufacturing and commercial cities provide a vast market for the nation's agricultural products. (Compare Fig. 2 with Figs. 118 to 120.)

Information concerning "farm facilities," including tractors, automobiles, water piped into the house, and telephones, was collected by the census in 1920 for the first time. Tractors are found mostly in the Corn Belt, and the Spring Wheat, Great Plains, and South Pacific Regions. Over one-third of the automobiles are in the Corn Belt, where one-half to three-quarters of the farms have such vehicles. Water has been piped into the houses mostly in the Hay and Pasture Region, especially in New England, and in the South Pacific Region. Telephones are more widely distributed than any other of the farm facilities; nevertheless, the map shows a noteworthy concentration in the Corn Belt and the Hay and Pasture Regions. These "farm facilities" are criteria of rural progress and prosperity, and as such their geographic distribution is deserving of consideration. (Compare Fig. 2 with Figs. 121 to 124.)

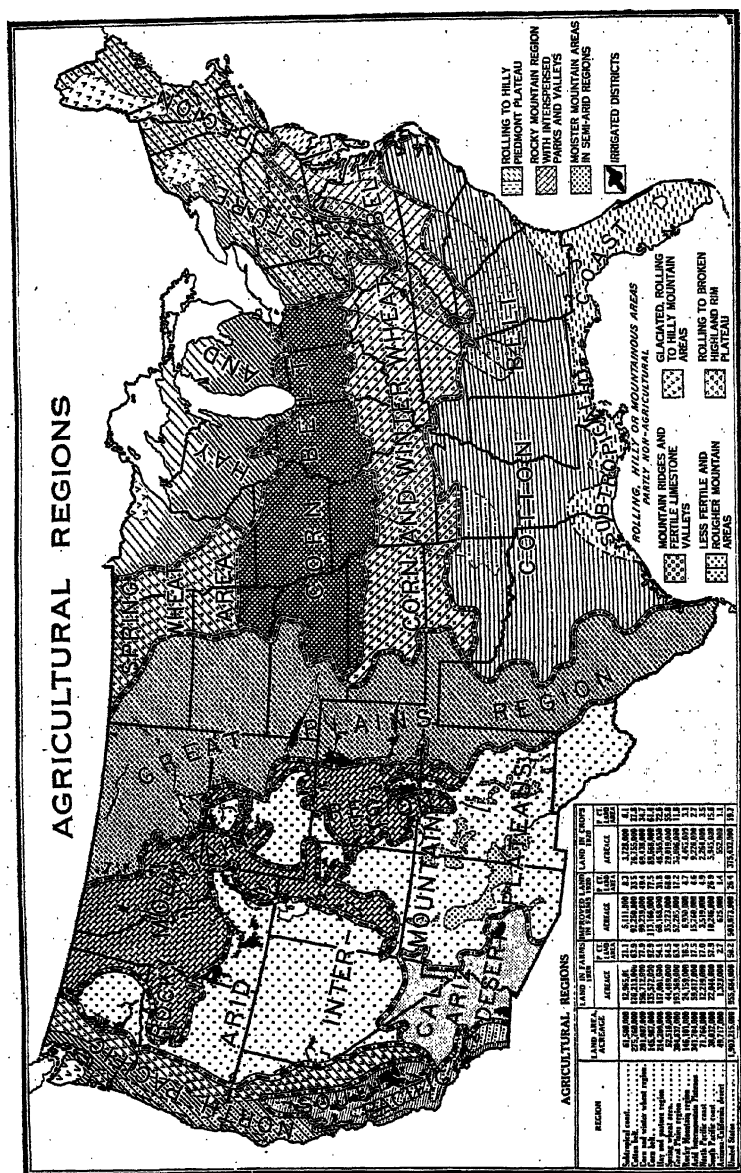


FIG. 2.—The United States may be divided into two parts, equal in area, the East and the West. The East has a humid climate, the West mostly an arid or semiarid climate, except the North Pacific coast and the higher altitudes in the Sierra, Cascade, and Rocky Mountains. Each of these two parts has been subdivided into six agricultural regions, characterized by distinct combinations of crops or systems of farming, the result largely of the different climatic conditions. In the East these regions, with one exception, are named after the crops; but in the West, because of the dominating influence of topography and the Pacific Ocean upon the climate and the agriculture, topographic and geographic names are used. (See pp. 7 to 9.)



FIG. 3.—This map shows the topography of the United States in a generalized way. It is a photograph of a relief model of the United States supplied by the United States Geological Survey. The mountainous character of the West, except the Great Plains Region, is clearly shown; but the map fails to show the high altitude of much of the West, particularly of the Rocky Mountain and Arid Intermountain Plateau regions. Owing to the altitude, these regions have a much cooler climate than corresponding latitudes in the East. The vast expanse of the Mississippi Valley, with its level to rolling surface, except for the Ozark uplift in the lower central portion, should be especially noted.

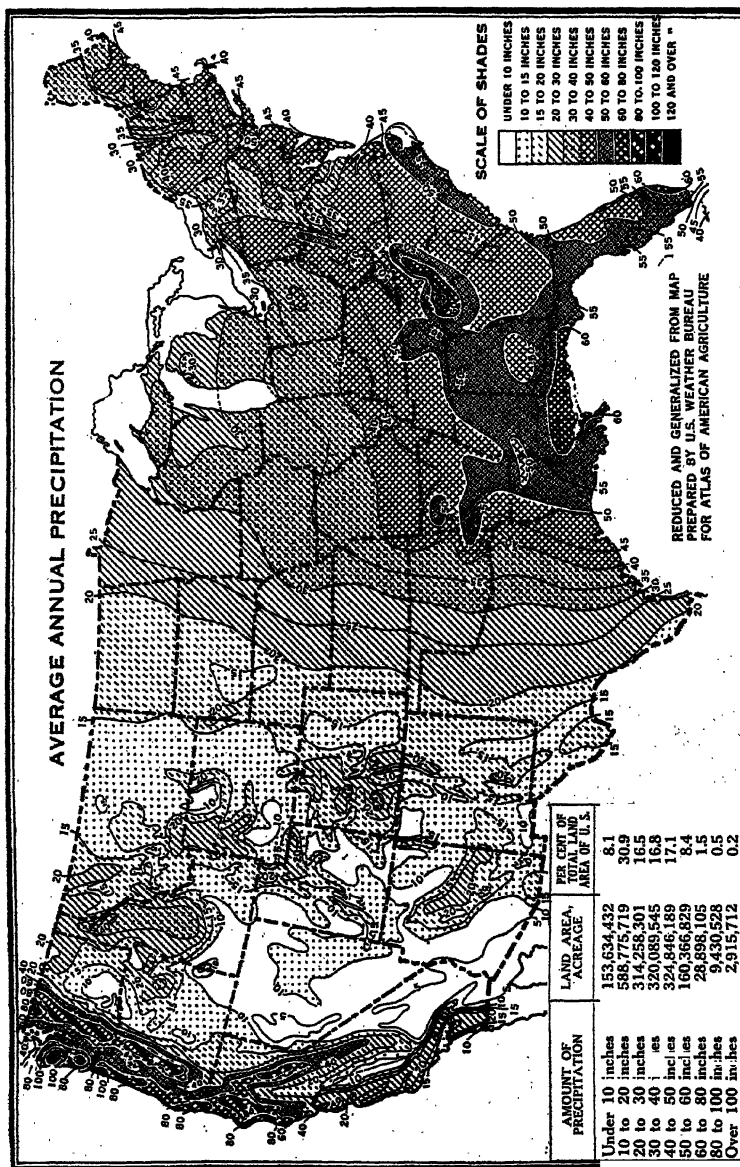


FIG. 4.—Precipitation includes rain, melted snow, sleet, and hail. The map is much reduced and generalized from a map prepared by the Weather Bureau and published in the Precipitation and Humidity section of the Atlas of American Agriculture. The map suggests why the United States should be divided agriculturally into an eastern and a western half. However, the division shown in Figure 2 does not follow a line of equal precipitation, but advances diagonally across two of the precipitation zones from 15 inches in the northwestern corner of North Dakota to 25 inches on the south Texas coast, where the evaporation is much greater and the rainfall more torrential and, consequently, more moisture is required for crop production.

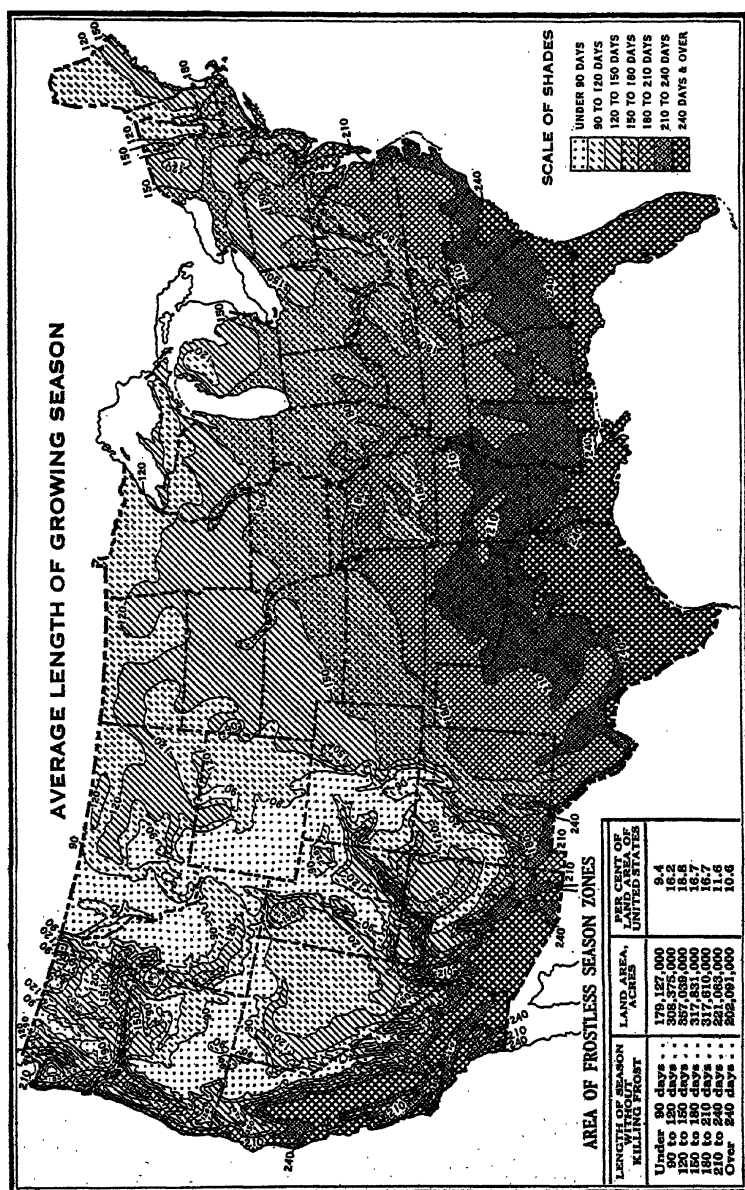
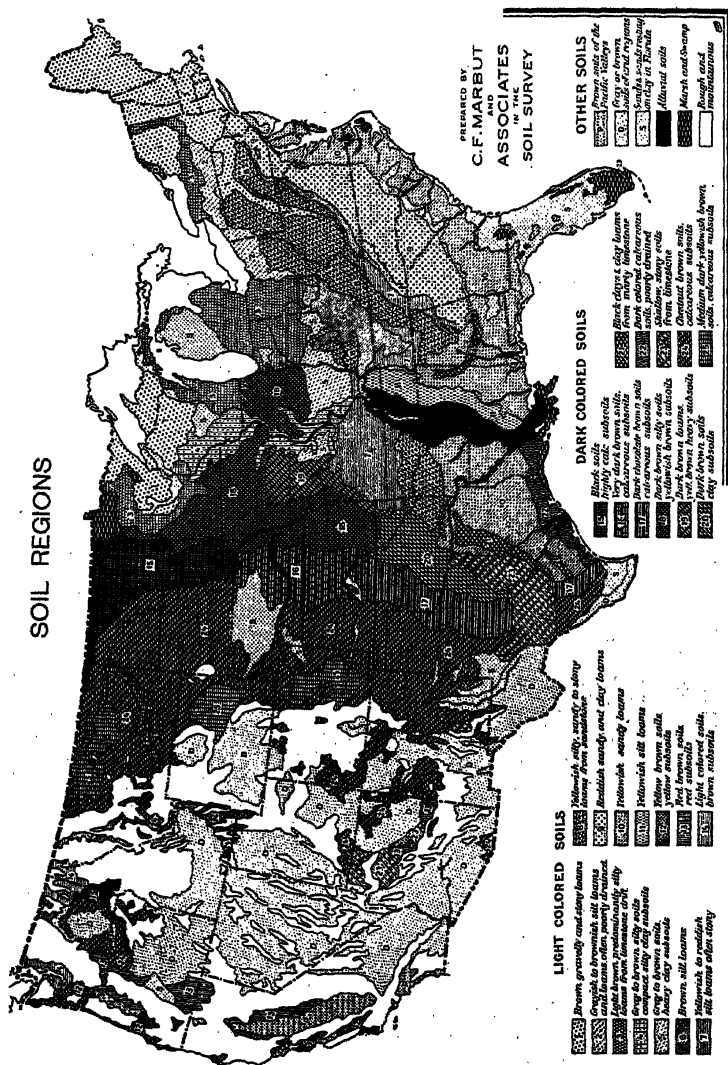


FIG. 5.—This map is much reduced and generalized from a map prepared by the United States Weather Bureau and published in the Frost and the Growing season section of the Atlas of American Agriculture. The higher altitude of the Rocky Mountain and Arid Intermountain Regions (see Fig. 3), and the drier air (see Fig. 4), which permits rapid loss of heat at night, are two important causes of the short frost-free season. Over much of these regions the frost-free season is shorter than in northern Maine or Minnesota. The powerful influence of the Pacific and the lesser influence of the Atlantic in lengthening the growing season along their shores should also be noted.





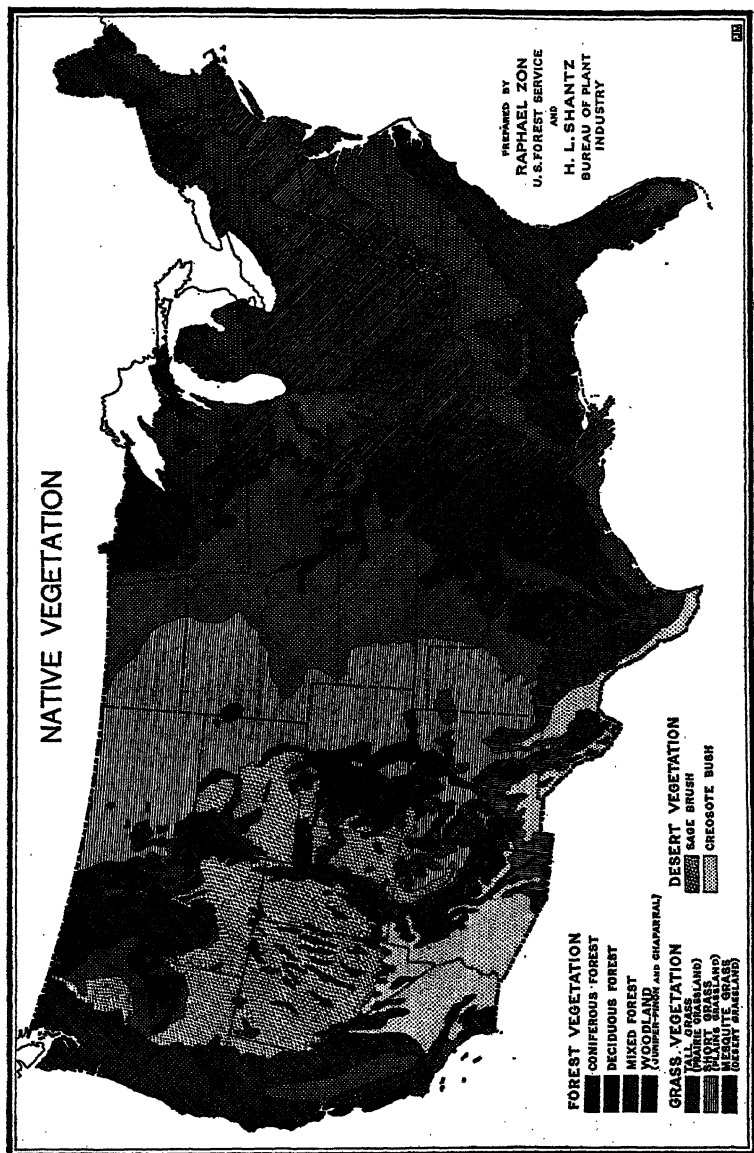


FIG. 7.—Forests, including semiarid woodland (pinon-juniper, chaparral, etc.), originally covered about 900 million acres in the United States. About 350 million acres have been cleared for agriculture, and as many more have been cut-over or devastated. (See Fig. 13.) About 600 million acres were clothed originally with grass, interspersed commonly with various herbaceous plants. Some 200 million acres of this grassland have been plowed up and used for crops, or for pasture in rotation with crops, including about 7 million acres irrigated. Desert vegetation characterized 400 million acres, of which about 12 million acres have been reclaimed by irrigation. Half of the remaining forest and woodland is pastured, practically all of the grassland, and nearly all of the desert. (See Fig. 12.)



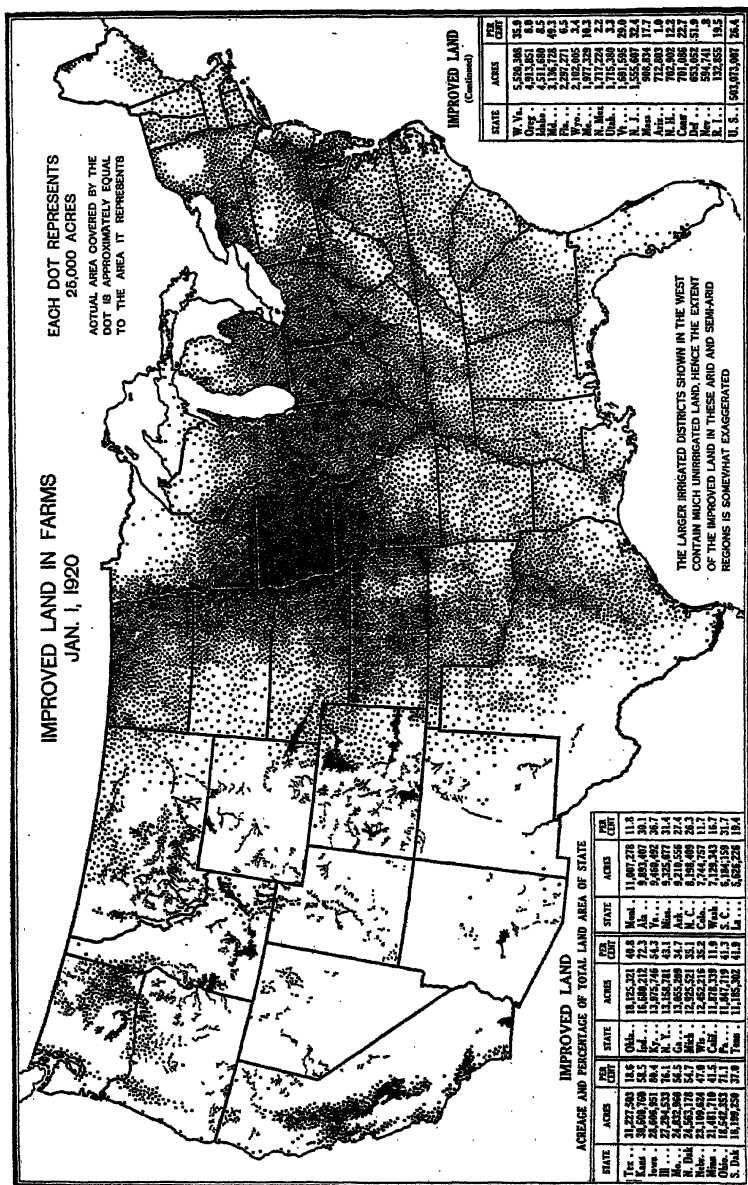
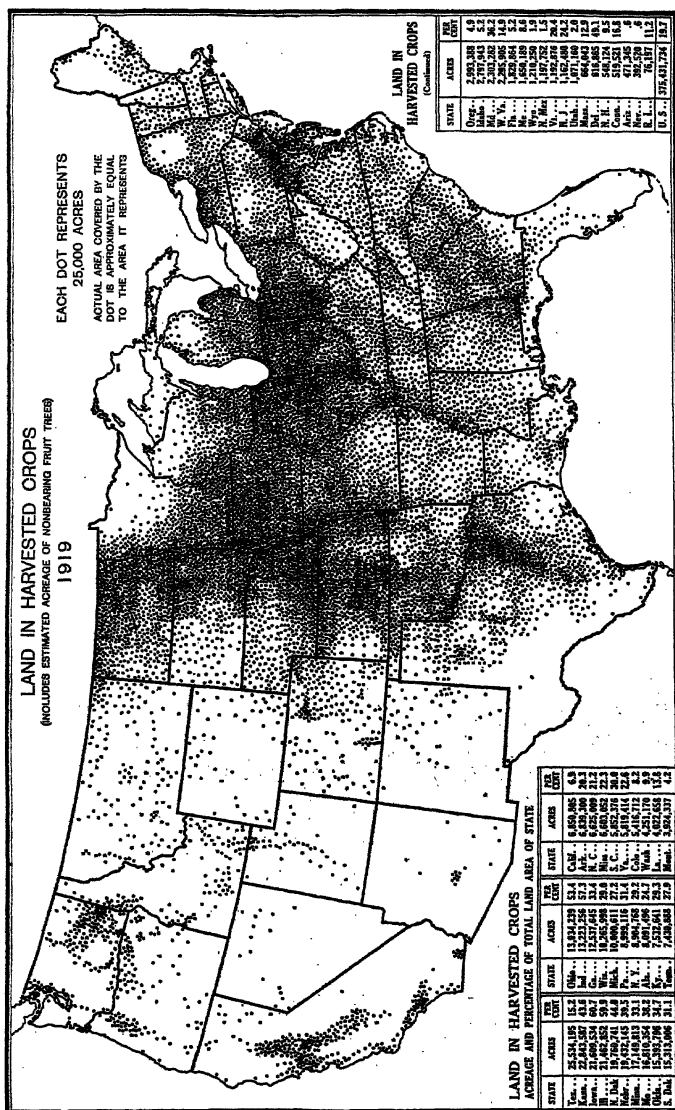


FIG. 9.—Improved land includes "all land regularly tilled or mowed; land in pasture that has been cleared or tilled; land lying fallow; land in gardens, orchards, vineyards, and nurseries; and land occupied by buildings, yards, and barnyards." Four-fifths of the improved land is in the humid eastern half of the United States, and three-fifths is concentrated in a triangular-shaped area, the points of which are located in western Pennsylvania, central Texas, and north-central North Dakota. In this area 60 per cent of the land area is improved farm land, whereas in the United States outside this area only 15 per cent is improved.



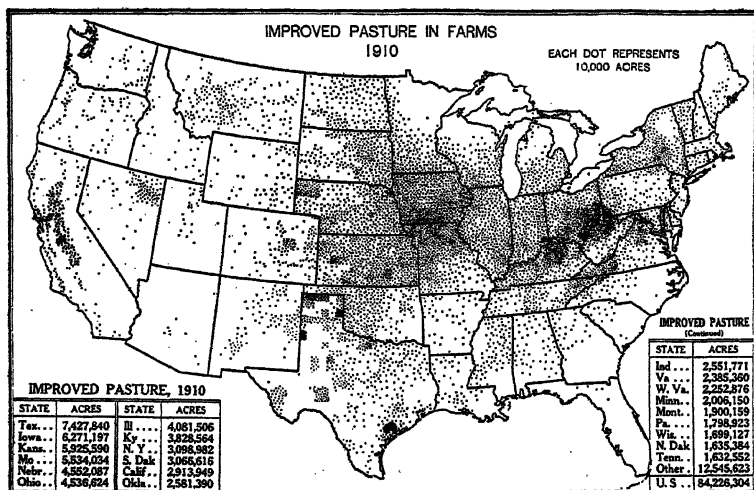


FIG. 11.—This map shows the location of the acreage of improved pasture, according to the returns of the 1910 census, which were tabulated in 1917 by the Department of Agriculture and published in Bulletin No. 626. The returns of the 1920 census have not yet been compiled. It appears probable that war-time prices encouraged the plowing and planting to crops of about 15 million acres of improved pasture between 1910 and 1920. The concentration of pasture acreage shown in certain Texas counties is owing largely to the census accrediting to the county in which the ranch headquarters is located the acreage that may extend into adjacent counties. The large acreage of improved pasture in the Ohio River valley and in the Corn Belt west of the Mississippi is noteworthy.

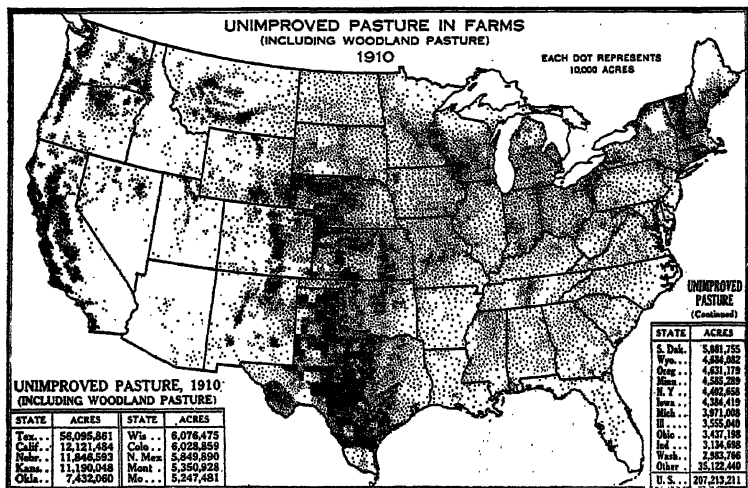


FIG. 12.—This map shows the location of forest and woodland in farms that was pastured in 1909, amounting to 98 million acres, and that of "other unimproved land" used for pasture, which amounted to about 109 million acres. In the States from Minnesota to Texas and eastward, especially in the South, forest and woodland pasture is much the larger item; but in the Great Plains Region and westward "other unimproved" pasture, which consists almost wholly of native grasses and herbs, is the more important. In addition to the unimproved pasture in farms in the West there is a vast acreage of similar land not in farms, the aggregate of unimproved pasture and range in the West being about 800 million acres.

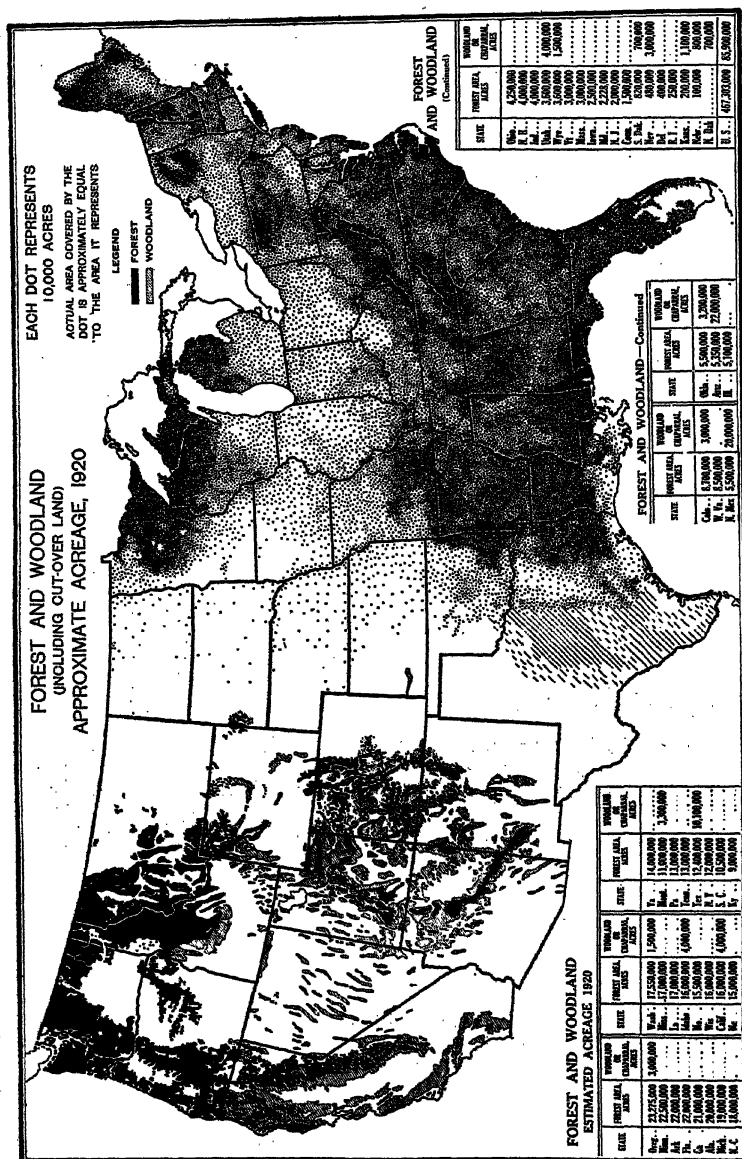


FIG. 13.—This generalized map of forest, cut-over land, and woodland was prepared in cooperation with the Forest Service. The figures given in the table are merely tentative. The estimates for the States in the originally forested eastern portion of the United States, except for several States in which forest surveys have been made, are based largely on deductions from the statistics of the 1920 census. Of the 467 million acres of forest and cut-over land in the United States about one-half is in the South, one-eighth in the Northeastern States, one-eighth in the Lake States, and nearly one-quarter in the West, mostly in the Rocky Mountain and North Pacific Regions. However, over half of the 187 million acres of virgin saw timber is in the West.

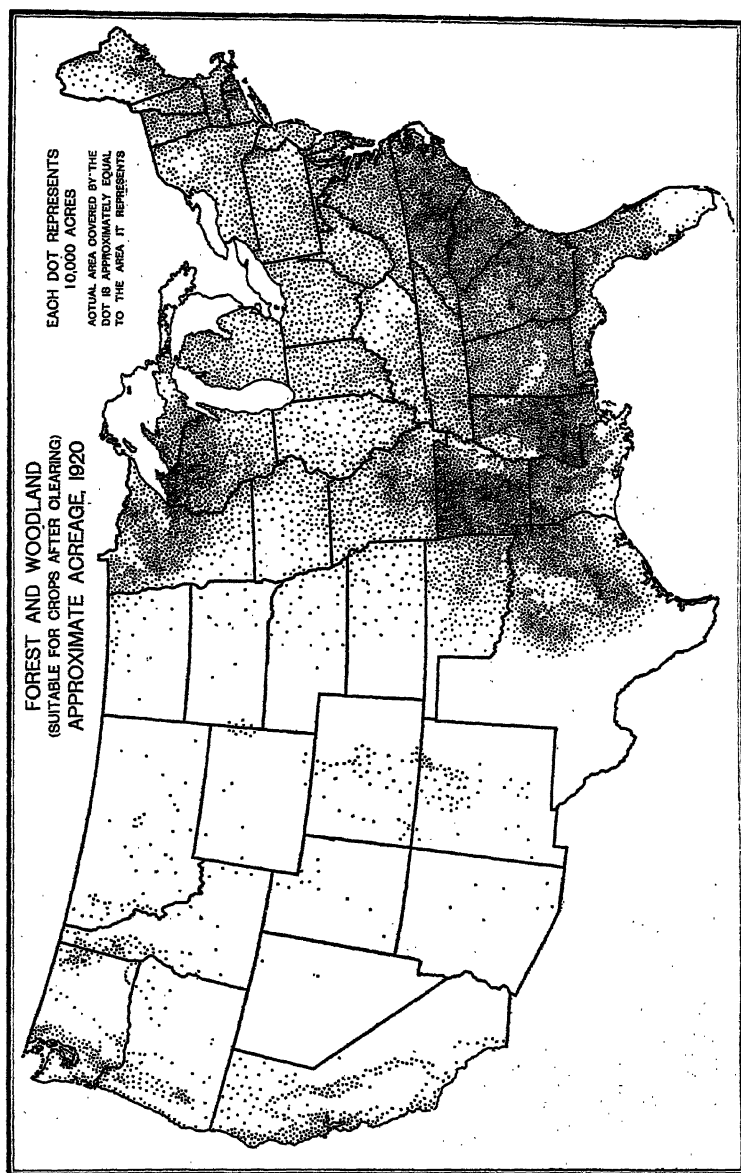


FIG. 14.—This map shows the approximate location and extent of forest, cut-over land, and woodland which could be used for the production of crops after clearing, and in many areas after drainage also. Only such part of this land should be cleared, however, as will pay adequate return on the cost of clearing. The estimates were compiled in 1918 from census data, Forest Service reports, and from correspondence with State and county officials and lumber companies, and not in 1920, as stated. Revised estimates are being compiled, based largely on 1920 census figures, soil survey reports, and forest surveys, hence no table is given in connection with the map.





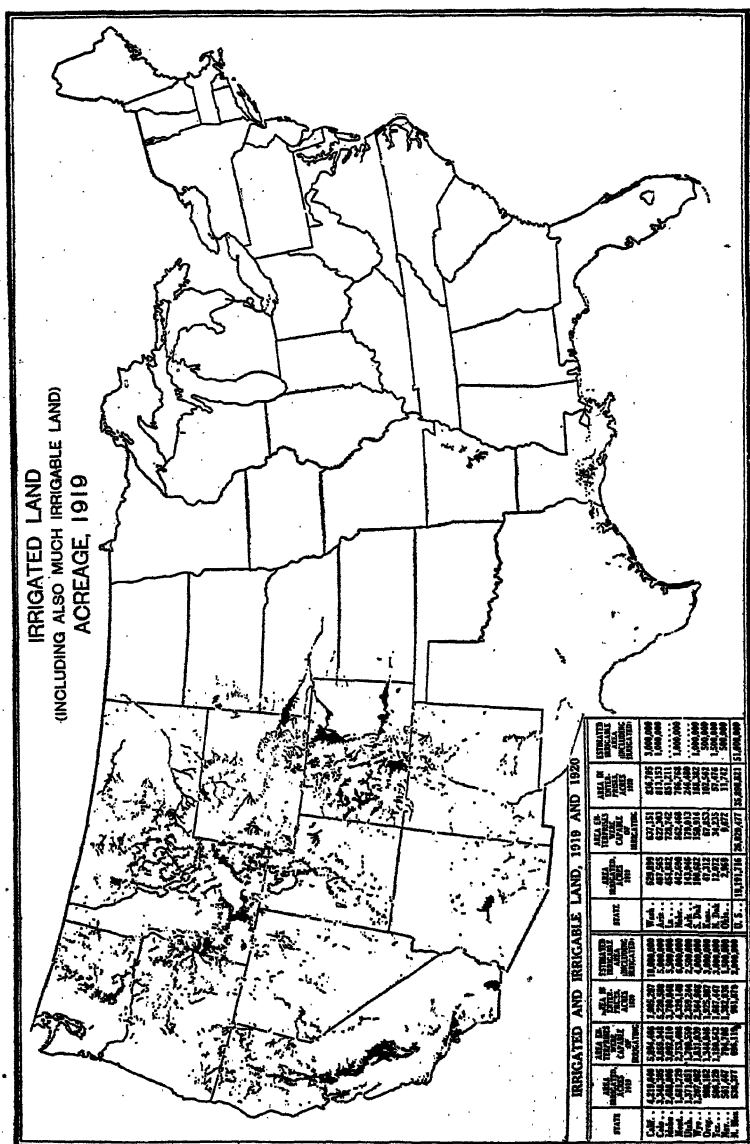


FIG. 16.—The area of irrigated land increased 5 million acres, or one-third, between 1909 and 1919; and the irrigation enterprises were capable of irrigating 7 million acres more than were actually irrigated in 1919. There is sufficient water in the West to irrigate double the area the enterprises were capable of irrigating in 1920, or about 50 million acres, when higher prices of farm products justify the constantly increasing cost per acre of construction of irrigation works. California, Colorado, and Idaho lead in irrigated acreage at present; but Montana rises into second place in the estimate of total irrigable area. Estimates of irrigable area were supplied by R. P. Teele.

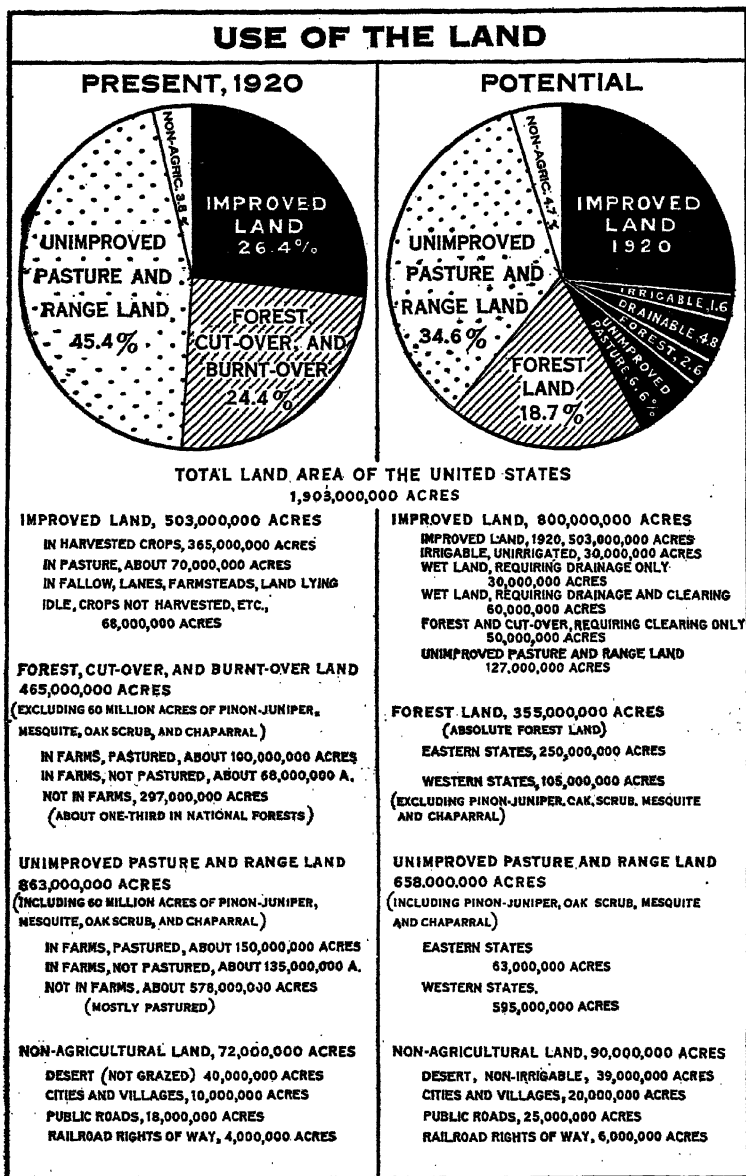


FIG. 17.—It is possible to increase the area of improved land about 800 million acres, or 60 per cent, by irrigation, drainage, clearing, and dry farming. But until farm products are higher in price most of this reclamation work would not prove profitable. On the other hand, although there are about 355 million acres of humid land so hilly or sterile as to be fit only for forests, the price of lumber will probably warrant the additional use permanently of 100 million acres of poor potentially arable land for forest instead of crops. In other words, the present forest and cut-over area is not likely to decrease greatly. The area in cities and villages is relatively insignificant and will remain so even with double or treble the present population.

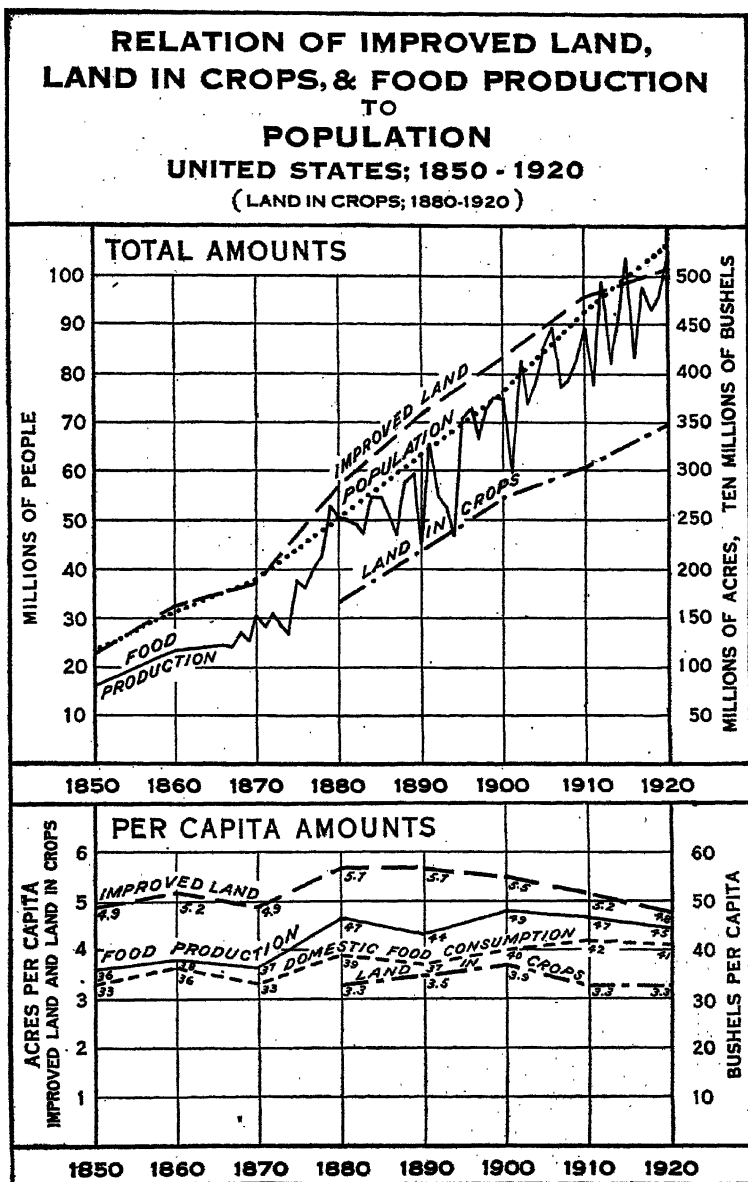


FIG. 18.—The amount of improved land kept pace with the increasing population from 1850 to 1870, increased more rapidly than population till about 1885, then more slowly till 1910, and during the decade 1910-1920 increased only 5 per cent, as compared with 15 per cent increase in population. Food production, however, increased more rapidly than population till about 1906, or for 20 years after the peak had been reached of acreage of improved land per capita, and has since increased more slowly than population. But consumption per capita has been maintained up to the present time by diminishing the exports. The per capita production and consumption figures are five-year averages centered on the census year.

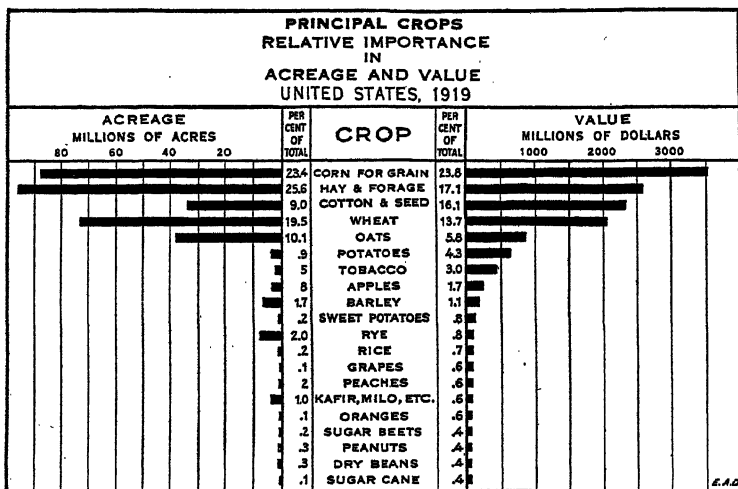


FIG. 19.—Five crops—corn, hay and forage, cotton, wheat, and oats—constitute nearly 90 per cent of the acreage and over 75 per cent of the value of all crops. Corn for grain is the leading crop on the basis of value, and if the acreage of corn cut for forage and for silage be added to that of corn for grain, instead of being included with hay and forage, corn is the leading crop also in acreage. Cotton ranked third in value, but fifth in acreage in 1919, the value of the cotton crop per acre being about twice that of corn or wheat. Wheat stood fourth in value but third in acreage, while oats were fifth in value and fourth in acreage. Potatoes, then tobacco and apples ranked next to these five crops in value, but barley, rye, and the grain sorghums ranked next in acreage.

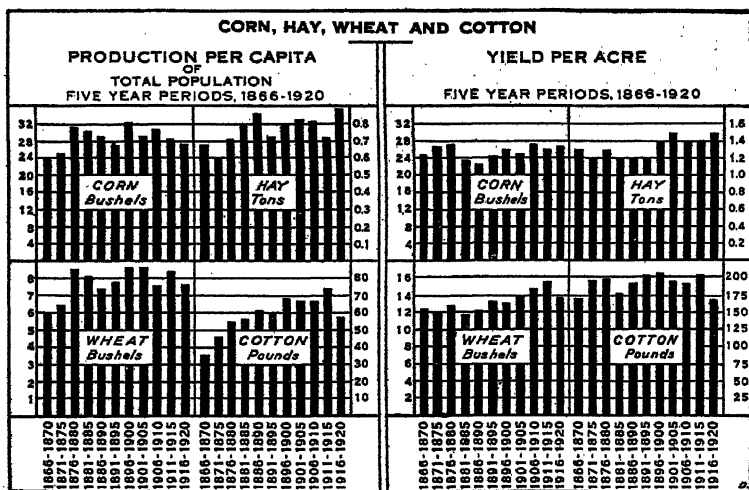
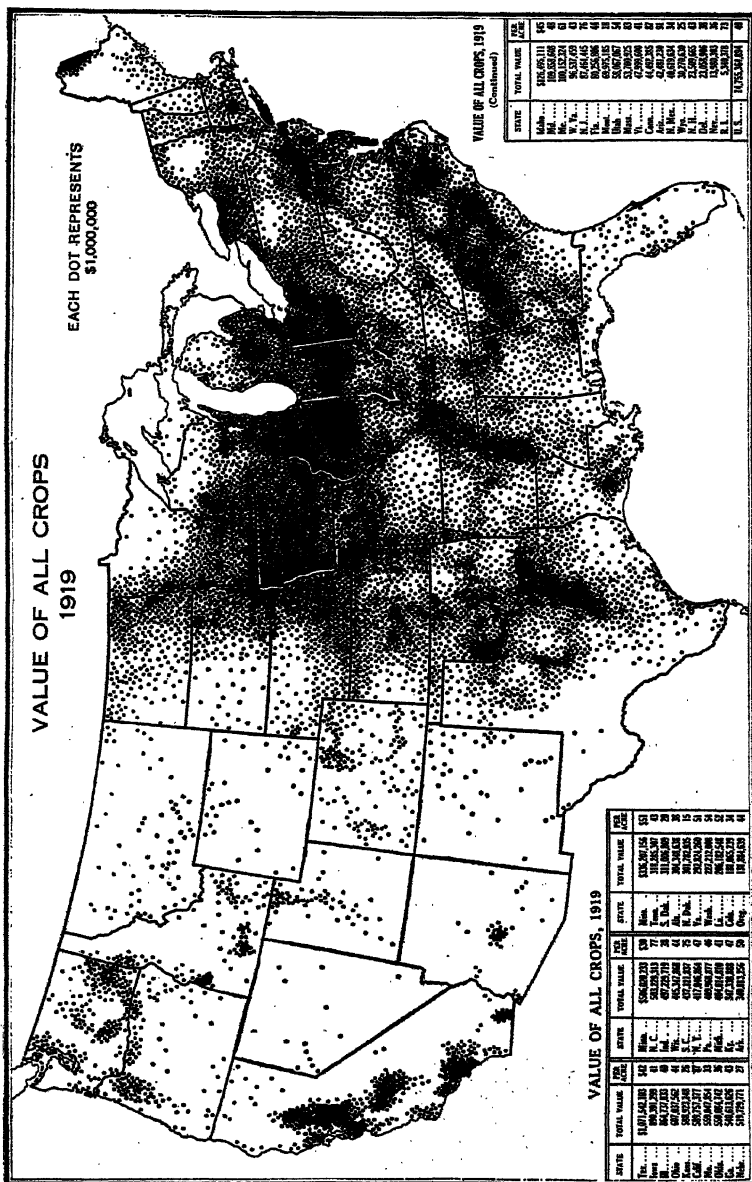
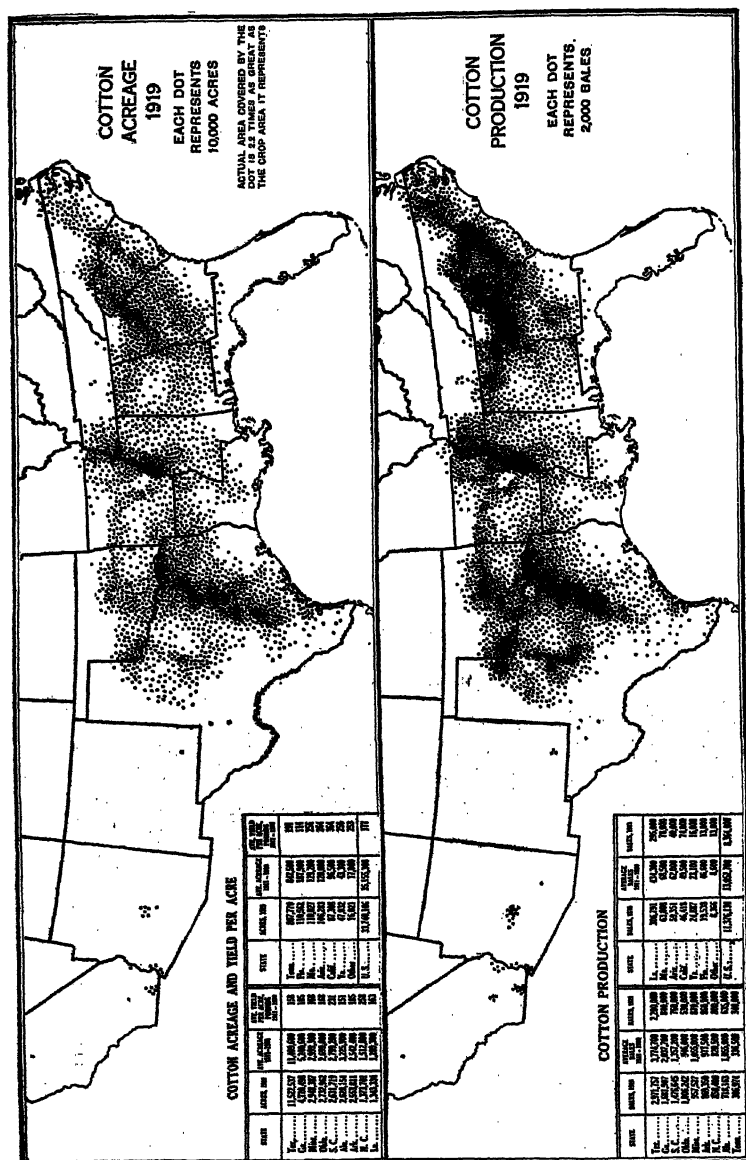


FIG. 20.—These four crops—corn, hay, wheat, and cotton—constitute three-fourths of the total crop acreage of the United States. Production per capita, it will be noted, rose for 15 to 20 years after the Civil War, then remained more or less steady for 25 to 30 years, and has recently declined, except in the case of hay. The yield per acre of corn has remained remarkably constant for 55 years, of hay and wheat has increased about one-sixth, but the yield per acre of cotton has declined notably since 1914. In general, production had kept pace with population until recently, not primarily because of increasing yields per acre, but mostly because of expanding crop acreage.





FIGS. 22 AND 23.—The northern boundary of the Cotton Belt is approximately the line of 200 days average frost-free season (see Fig. 5) and 77° mean summer temperature, the southern boundary that of 11 inches autumn rainfall, because wet weather interferes with picking and damages the lint. This southern boundary is now moving northward, as the milder winter temperatures near the Gulf and longer season permit increased injury by the boll weevil. The western boundary of cotton production without irrigation is approximately the line of 23 inches average annual rainfall (see Fig. 4). The densest areas on the map are districts of richer soils, notably the Black Prairie of Texas and the Yazoo Delta (see Fig. 6), or heavily fertilized soils, especially those of the Piedmont and Upper Coastal Plain (see Fig. 109).

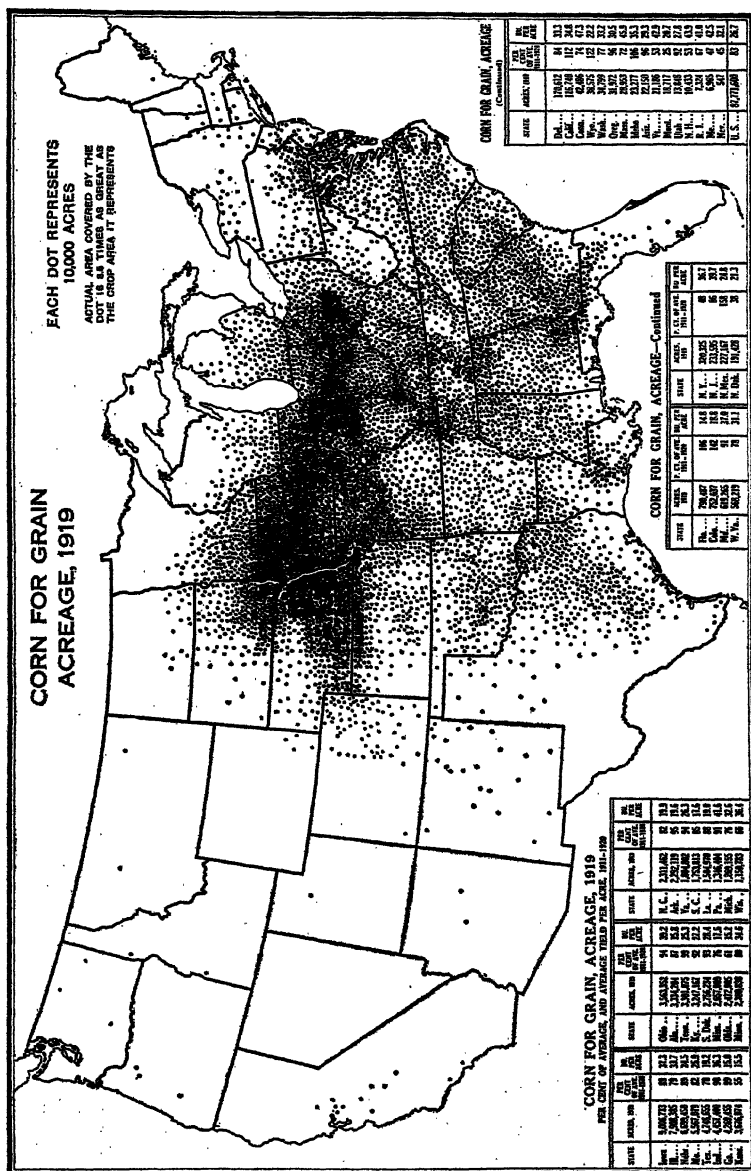


FIG. 24.—Over two-thirds of the corn acreage of the world is in the United States, nearly all east of the line of 8 inches mean summer rainfall and south of the line of 66° mean summer temperature. Nearly 90 per cent of the acreage of corn for grain in the United States is in the Corn Belt, the Corn and Winter Wheat Region, and the Cotton Belt. In these three regions corn constitutes about one-third of the acreage of all crops. In the Corn Belt it is dominant, contributing nearly two-fifths of the acreage and half of the value of all crops. Hay, associated with spring oats in the northern portion and with winter wheat in the southern portion, are the other important crops in the Corn Belt. (See Figs. 29, 32, and 38.)



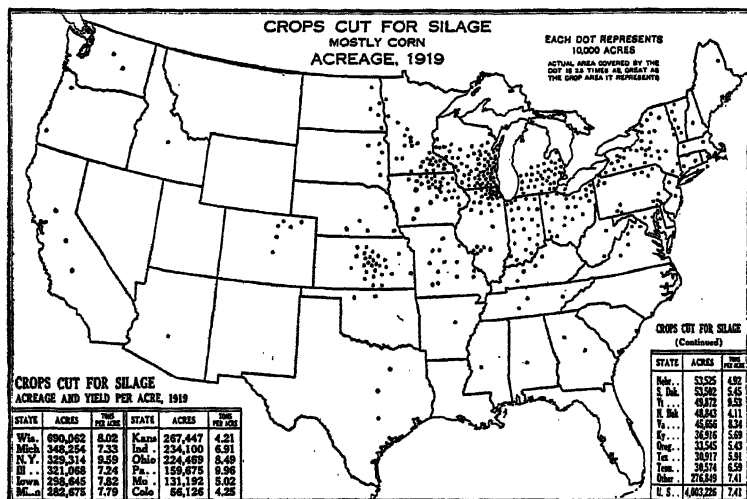


FIG. 25.—Corn constitutes probably 95 per cent or more of the acreage of crops cut for silage. In the Southwest relatively small amounts of kafir and milo are used for silage; and in the Northwest occasionally sunflowers are so used, likewise pea vines in Wisconsin; but the amounts, except of kafir and milo, are insignificant. Silage is fed principally to dairy cows in the winter, but its use for beef cattle is increasing rapidly, especially in the Corn Belt, and a small amount is fed to sheep. Consequently at present the area of silage crops corresponds in a general way with that of dairy cows, except in central Kansas, where silage is fed mostly to beef cattle. (See Figs. 81 and 82.)

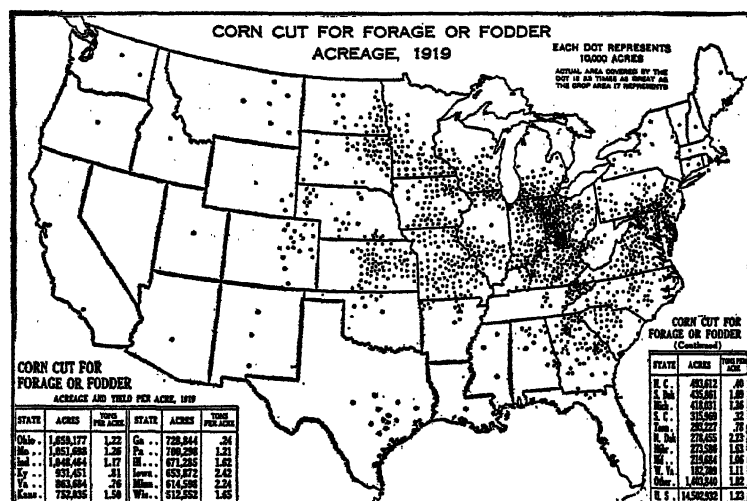


FIG. 26.—Corn is cut for forage mostly around the margin of the Corn Belt and in the Middle and South Atlantic States. This practice corresponds, in a general way, with the areas in which corn is cut and shocked. Doubtless much, perhaps most, of this corn reported to the census as cut for forage was also harvested for grain. Much of the acreage of corn shown on this map, therefore, is also shown on the map of corn for grain (Fig. 24). The Department of Agriculture estimates the area of corn cut for forage only in 1921 at 2,600,000 acres. Corn forage is fed almost wholly to cattle, though a little is used to feed sheep and horses.

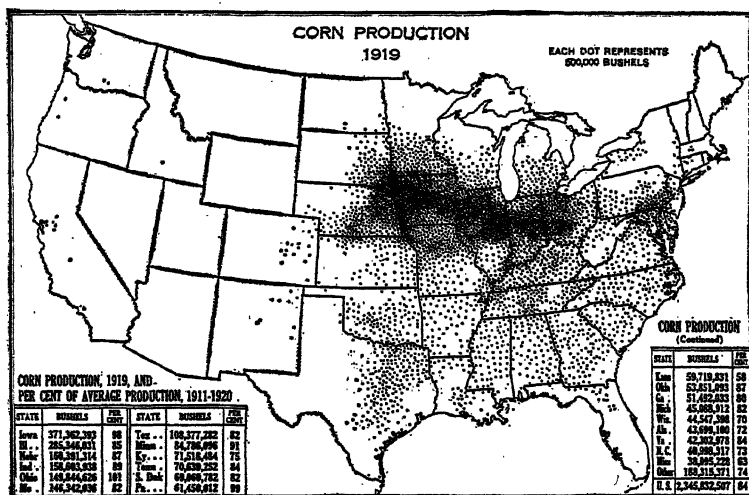


FIG. 27.—Corn is the great American cereal, constituting about 60 per cent of the tonnage of all cereals grown in the United States, and over 50 per cent of the value. More than half of this crop is produced in the Corn Belt; but corn is the leading crop in value also in the Corn and Winter Wheat Belt, and is the all-important cereal in the Cotton Belt. Corn is a very productive crop, yielding, in general, about twice as many pounds of grain per acre as wheat, oats, barley, or rye. The climate and soil of the Corn Belt are peculiarly suited to it. Probably no other area in the world of equal extent produces so much food per square mile as the Corn Belt. (See Figs. 21 and 104.)

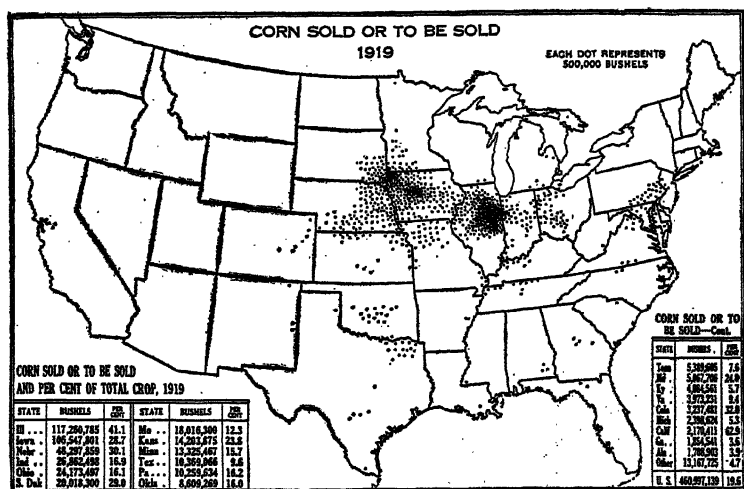


FIG. 28.—In the Corn Belt most of the corn is fed to hogs, cattle, and horses on the same farm that it is grown (see figs. 89, 81, and 76); but a considerable quantity, amounting to 41 per cent of the crop in Illinois in 1919, and about 30 per cent in Iowa, South Dakota, and Nebraska, is sold to nearby farmers, is shipped to consumers in the South and East, is exported largely through Chicago and the Atlantic ports, or is made into starch and glucose. The corn which the map indicates as sold from the farms in Pennsylvania, Maryland, and several Southern States, consists mostly of sales to neighboring farmers. Farms near the water front in Maryland and Virginia, however, ship corn by water to Baltimore, whence it is exported.

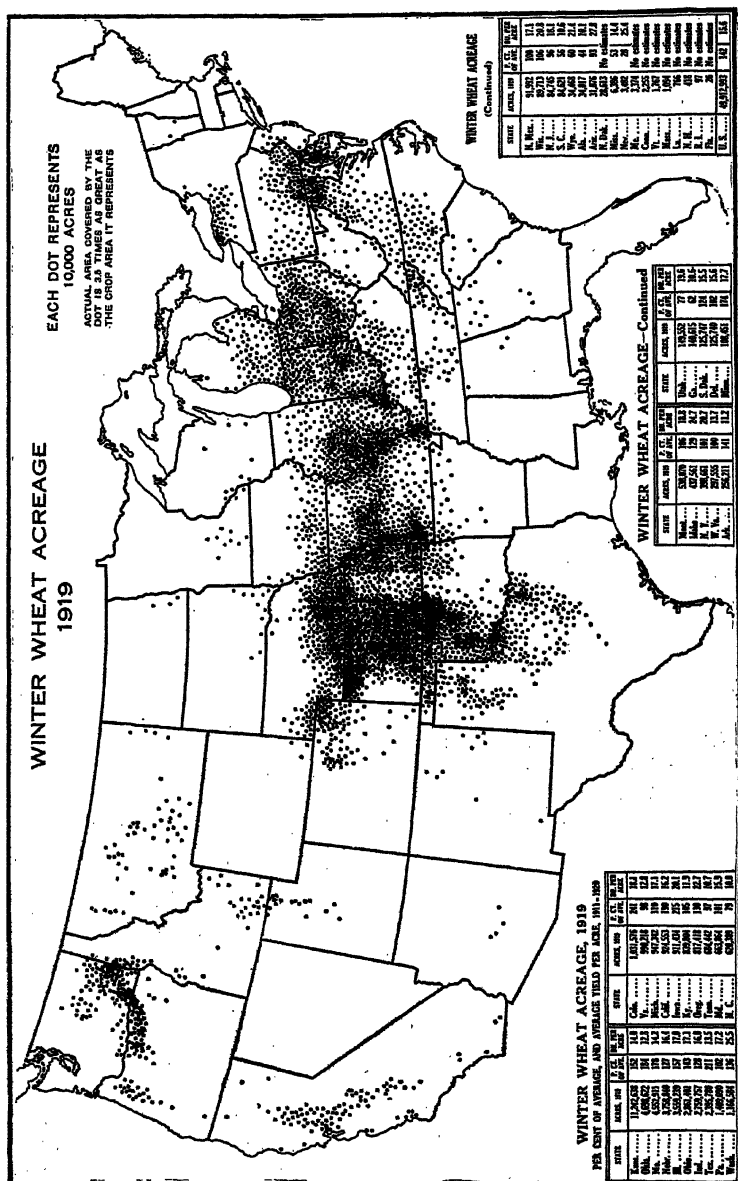


FIG. 29.—The Corn and Winter Wheat Belt included 42 per cent of the Nation's acreage of winter wheat in 1919, and 30 per cent more was located in the southern and eastern portion of the Corn Belt. The southern boundary of this winter wheat belt follows the isotherm of 72° during the month preceding harvest (June 15); and although some wheat is grown south of this line, it frequently suffers severe damage from rust. The northern frontier of winter wheat follows, in a general way, the mean winter temperature line of 20°, which extends in a northwesterly direction from northern Illinois and Iowa diagonally across South Dakota and Montana.

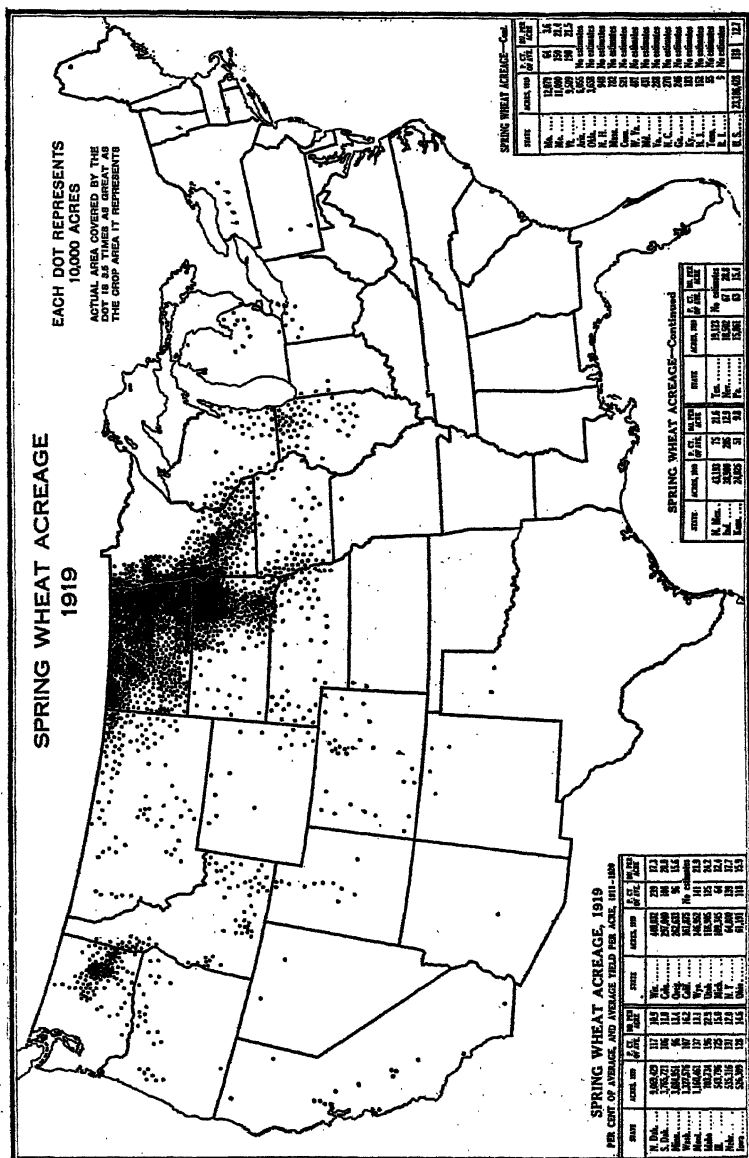


FIG. 30.—About half the acreage of spring wheat in 1919 was in the Spring Wheat Area, where it constituted 40 per cent of the acreage of all crops, and most of the other half was located in the adjoining portion of the Great Plains Region. A secondary but important center of production is located in the subhumid portions of Washington and Oregon. The southern boundary of the Spring Wheat Area is determined largely by the northern boundary of winter wheat, which is, in general, more productive and more profitable where it can be grown. The northern limit of spring wheat is approximately the mean summer temperature of 58°, which is found in the United States only in the western mountains.

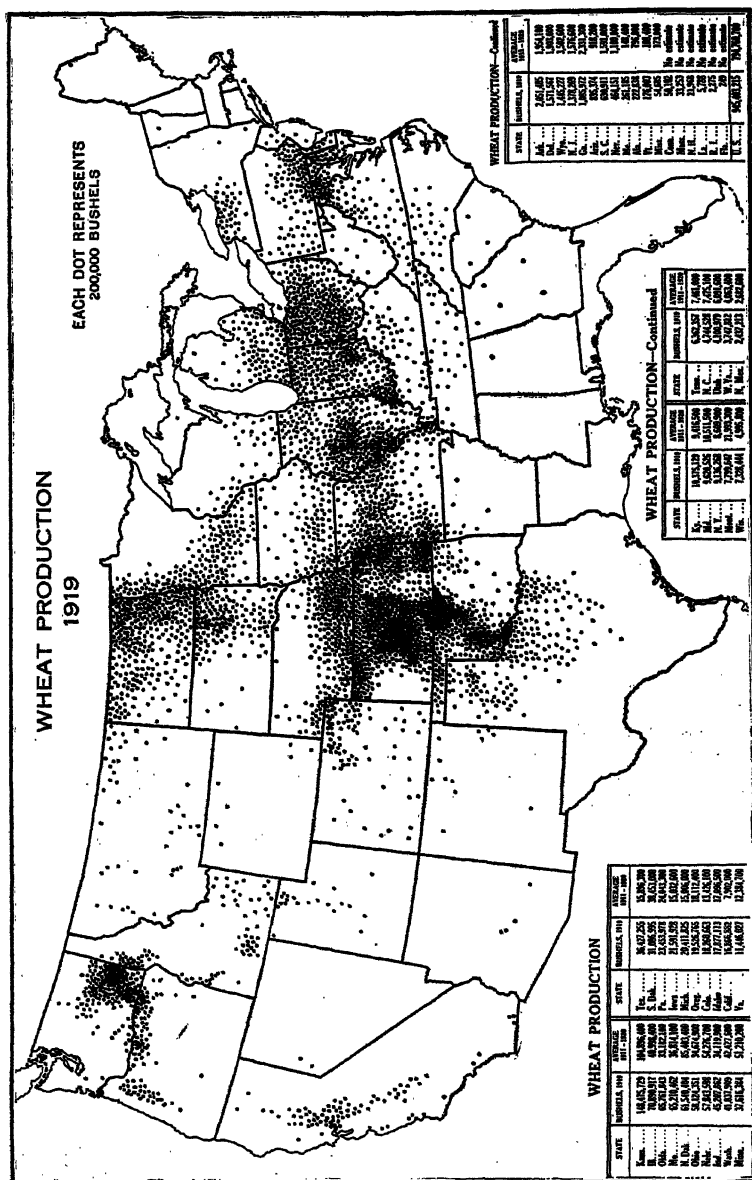


FIG. 31.—The United States produces about one-fifth of the world's wheat, as compared with three-fifths of the world's corn and cotton. The wheat crop of the United States, measured in bushels, is usually from one-fourth to one-third of the corn crop. Half of the wheat crop was grown in six States in 1919. Kansas was the leading State, as usual, but North Dakota, which has often ranked first and is usually second, had a very poor crop in 1919. On the other hand, both acreage and production were unusually large that year in the southern portion of the Corn Belt and northern portion of the Corn and Winter Wheat Region. (See Fig. 2.)

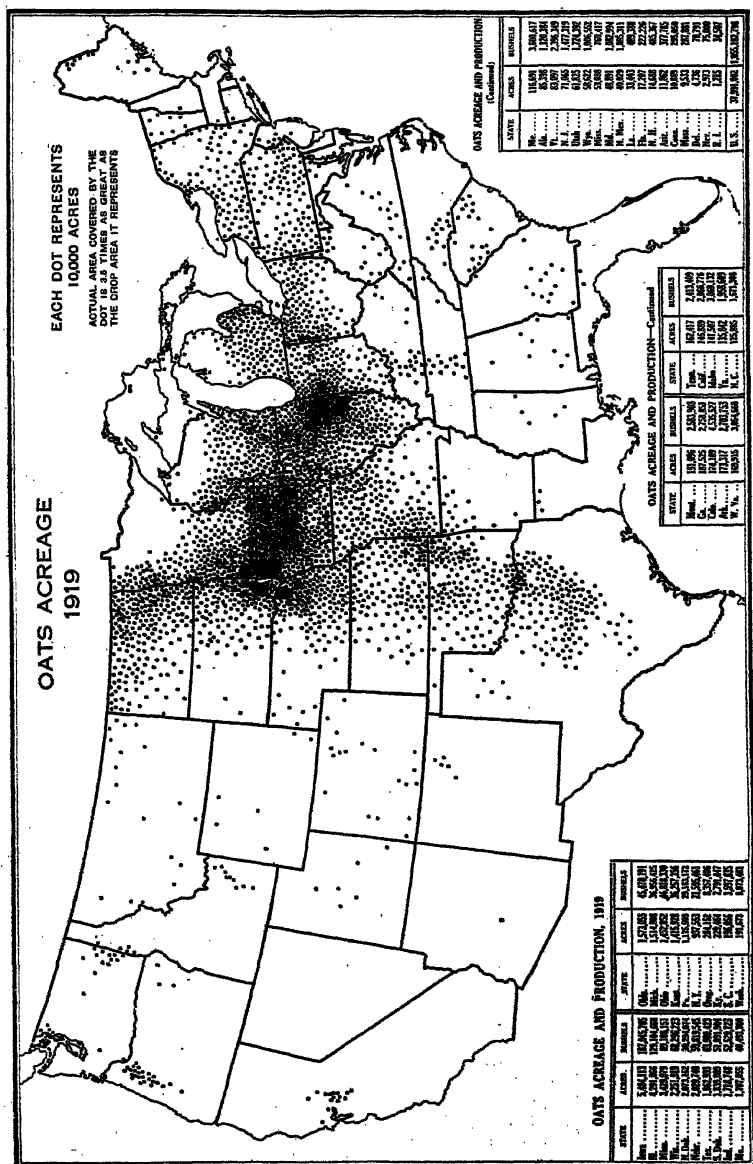


FIG. 32.—The Oat Belt of the United States consists of a crescent-shaped area extending from New England to North Dakota, bounded on the north by the Great Lakes and on the south by the Corn and Winter Wheat Region. An arm extends southwestwardly from this belt across eastern Kansas and Oklahoma to central Texas. Oats prefer a cool, moist climate, and this large acreage in the Corn Belt and southwesterly is owing more to the need of feed for horses, and of a spring grain nurse crop for clover, than to particularly favorable climatic conditions. In the Southern States most of the oats are fall sown, but in the North the oats are sown in the spring.

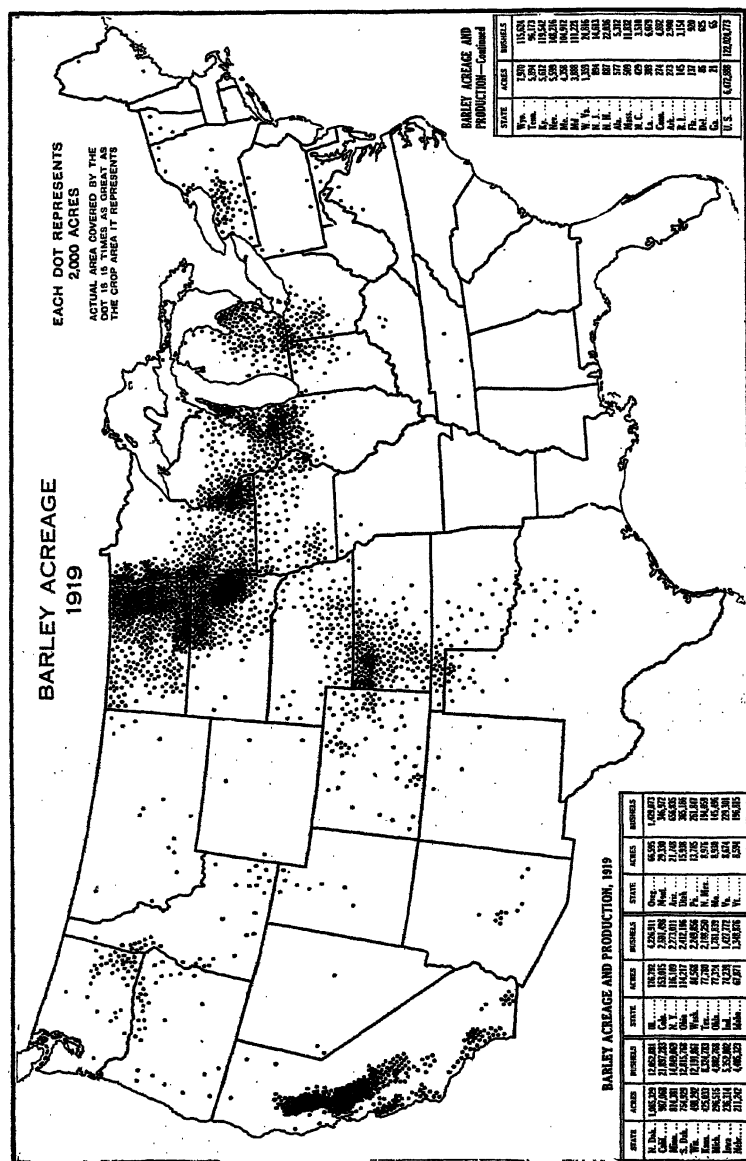


FIG. 33.—It should be noted that a dot on this map represents only one-fifth as much acreage as on the maps of corn, wheat, and oats. Barley is a minor crop in the United States compared with these crops, except in southeastern Wisconsin, southeastern and northwestern Minnesota, the eastern portions of the Dakotas, and the valleys of California. In these five States nearly two-thirds of the Nation's barley acreage is found. Minor centers may be noted on the map in northwestern Kansas, southeastern Michigan, and northwestern New York. These barley districts are characterized by a cool, sunny climate. The crop in California is grown during the winter. Much barley is also sown in California to be cut green for hay (see Fig. 45).

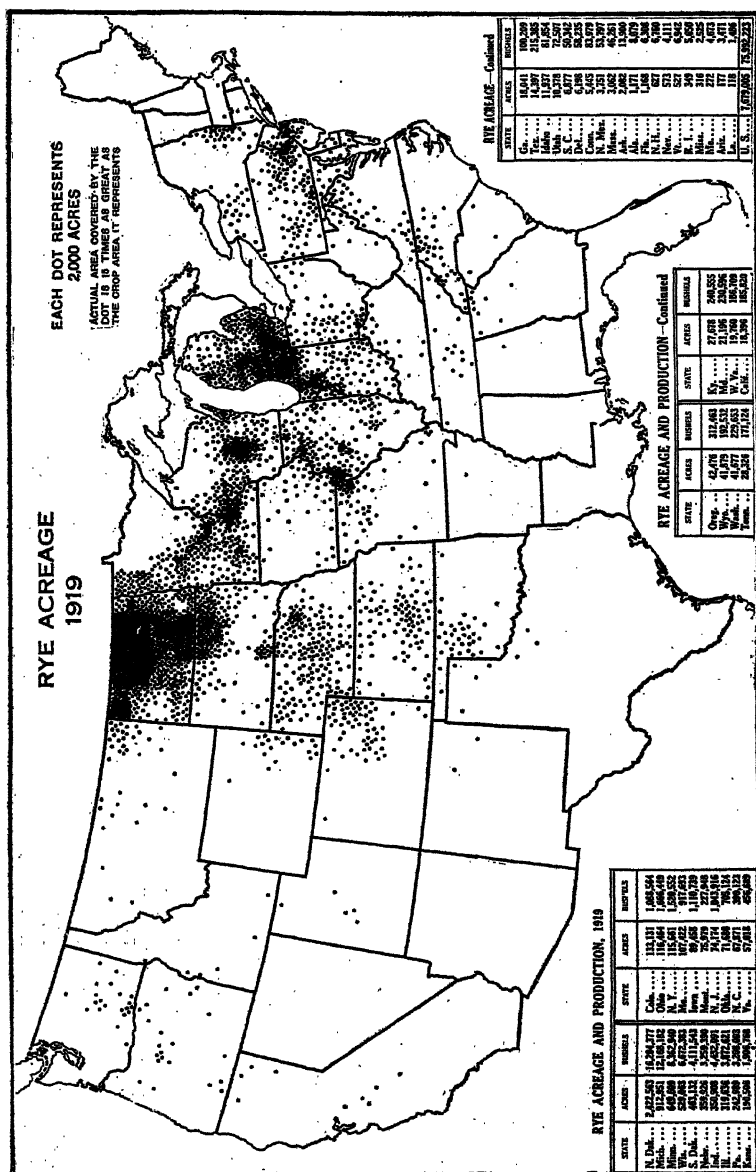


FIG. 34.—Rye acreage in North Dakota increased from 48,000 in 1909 to 2,422,000 in 1919. This acreage in North Dakota in 1919 was almost one-third of the total in the United States, although, owing to an unfavorable season, the production was little greater than in Michigan. Rye heretofore has been grown mostly in the sandy sections of the Lake States, and this sudden extension of production onto the subhumid lands of the Spring Wheat and Great Plains regions is an interesting and probably significant development. The acreage of rye in the United States in 1919 was much greater than ever before, exceeding, even, the acreage of barley, but has declined nearly half during the past two years.



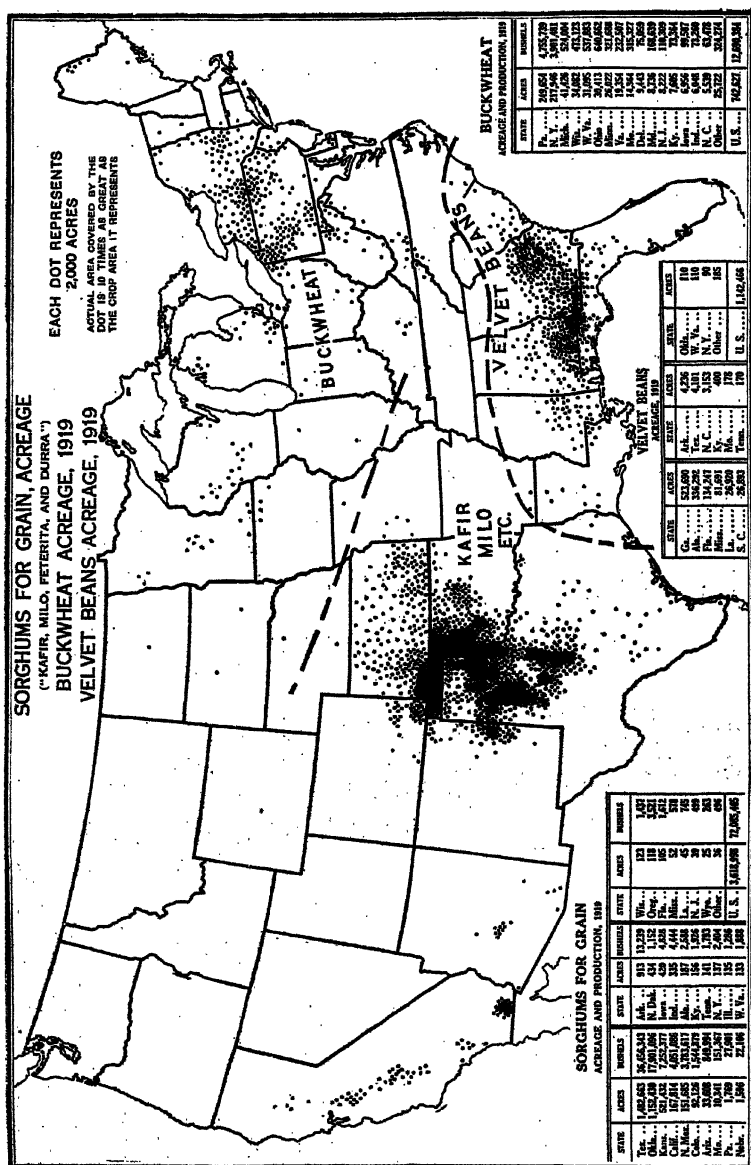


FIG. 35.—The grain sorghums are, perhaps, our most drought-resistant crops. The expansion of acreage during the past two decades in the southern Great Plains area has been extraordinary. From 1899 to 1909 the acreage in the United States increased from 266,000 to 1,635,000, or sixfold, and between 1909 and 1919 it more than doubled. Buckwheat, which is practically confined to the Appalachian area and the Lake States, has decreased slightly in acreage since 1909. It is peculiarly adapted to districts having cool, moist summers and sour soils.

The velvet bean, grown as a forage crop, has increased greatly its acreage in the Southeastern States, where the boll weevil has discouraged cotton growers and awakened interest in live-stock production. (See Figs. 22 and 81.)

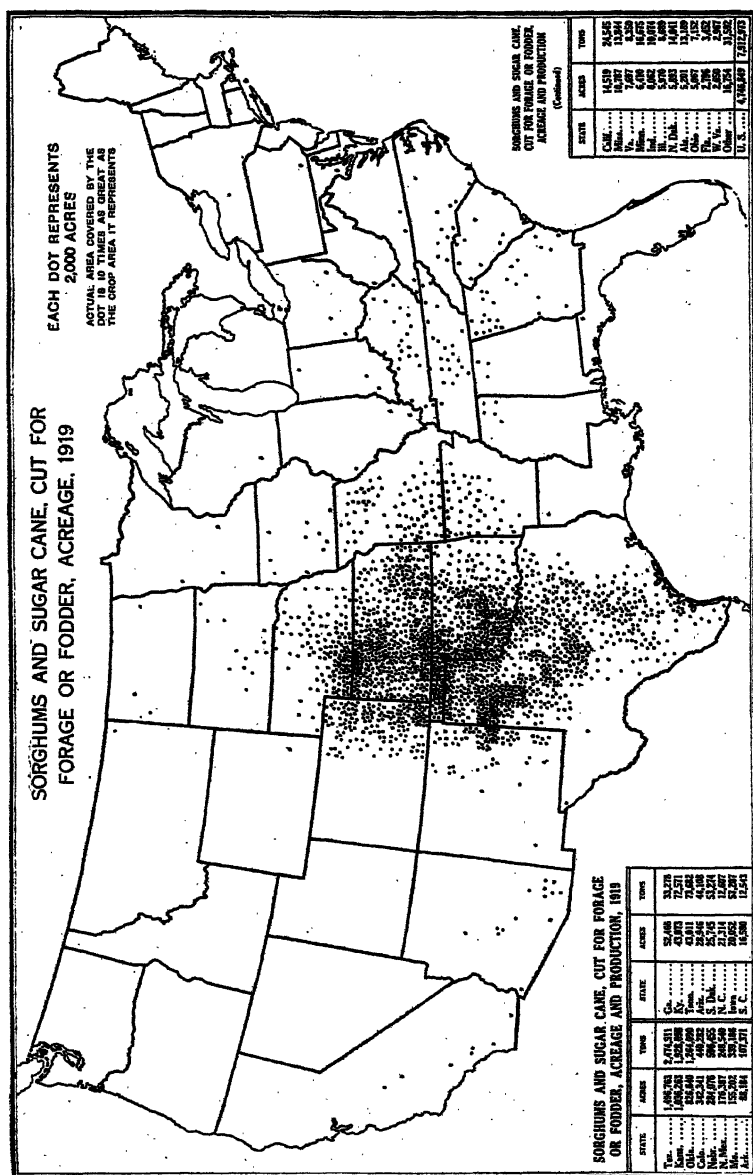


FIG. 36.—The sorghums are grown for forage much farther north than for grain; while the sweet sorghums, which are not commonly grown for grain, are frequently used for forage far to the east in the Cotton Belt and the Corn and Winter Wheat regions. The acreage of sorghums for forage is larger than the acreage for grain, especially in Kansas, where some sorghum is used for silage (see Fig. 25). It is interesting to note that the average yield per acre of sorghum forage was 1.7 tons in 1919, as compared with less than 1 ton per acre for corn in this area, and 1.2 tons for corn in the entire United States. The sorghums, apparently, yield more forage per acre in this semiarid area than corn in the humid regions.

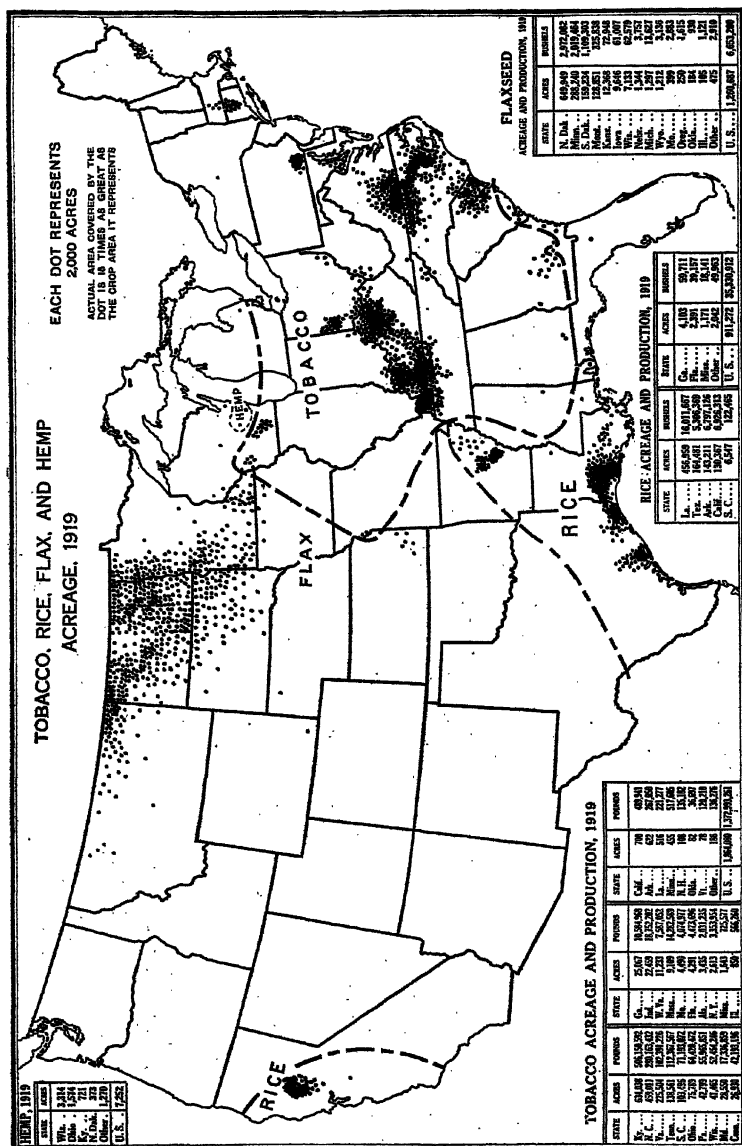


FIG. 37.—Nearly 90 per cent of the tobacco acreage is in six States—Kentucky, North Carolina, Virginia, Tennessee, South Carolina, and Ohio. But there are also important centers of production, especially of certain types, in southern Maryland, in Lancaster County, Pa., in the Connecticut Valley, and in southern Wisconsin. Tobacco is very sensitive to soil conditions, but these requirements vary with the different types. Rice production is now largely confined to the coastal prairies of Louisiana and Texas, the prairie district of eastern Arkansas, and the flat valley of the Sacramento in California, all areas of heavy subsoils which hold the irrigation water. Flax is grown in the Spring Wheat and Northern Great Plains Areas. Nearly half of the hemp is raised in Wisconsin.

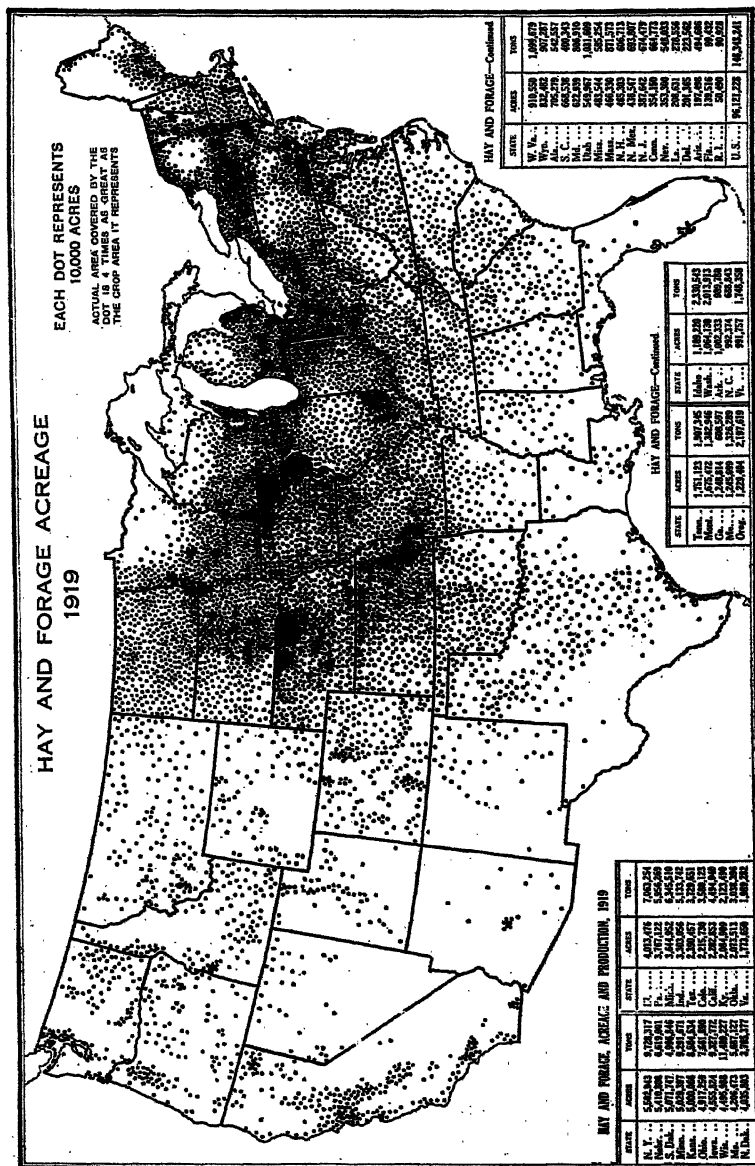


FIG. 38.—This map of hay and forage includes not only the hay crops but also corn and the sorghums cut for silage or fodder and root crops used for forage—13 items in all in the census schedule, of which 8 are shown in the following maps, and 3 have already been shown (figs. 25, 26, and 36). The hay and forage acreage, it will be noted, is largely concentrated in the Hay and Pasture Region and around the margin of the Corn Belt, the greatest State acreage being found in New York and the greatest tonnage production in Wisconsin. Relative to the acreage in crops, however, hay and forage is most important in the Rocky Mountain Region, where it occupies 55 per cent. of the crop land.

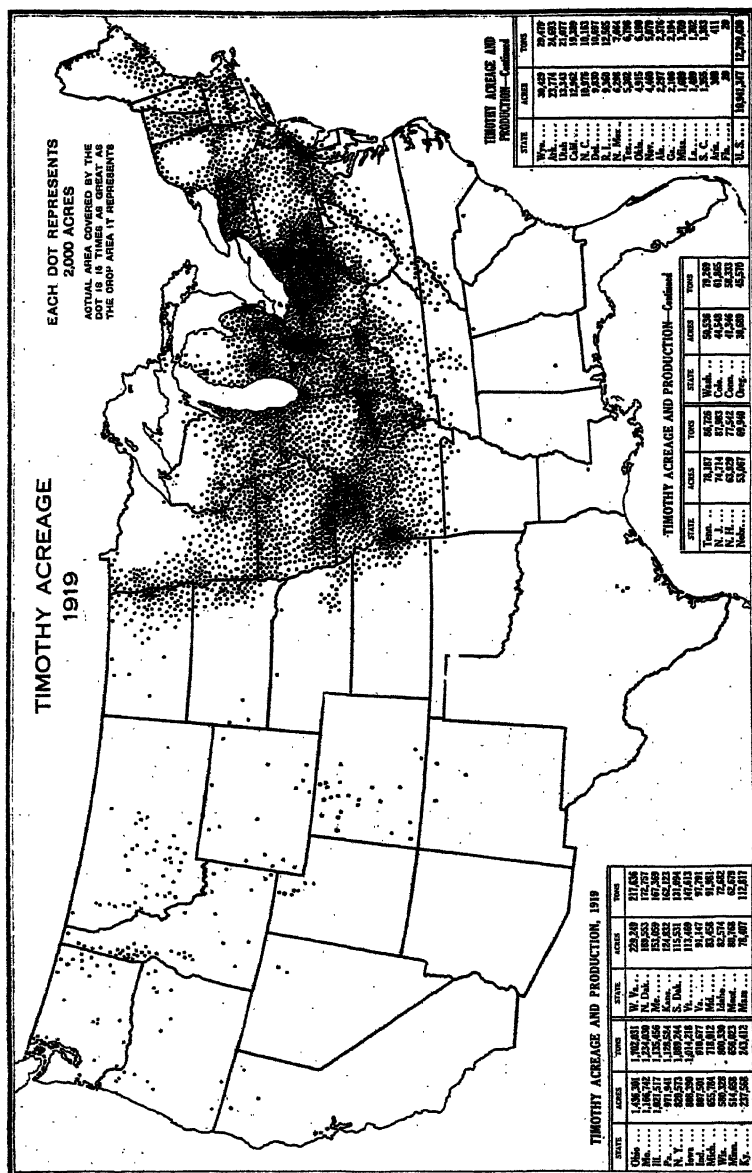


FIG. 39.—Timothy is practically confined to the northeastern quarter of the United States, except for a scattered acreage in the moister districts of the Rocky Mountain Region. The western margin of the timothy acreage in the Dakotas, Nebraska, and Kansas marks the beginning of the "Black-earth" belt, where lime has accumulated in the subsoil, of dense alfalfa acreage, and of dry-farming practices (see Figs. 6, 42, and 103). The southern boundary of timothy follows approximately the line of 200 days in the frost-free season, or 77° mean summer temperature. The districts of densest production in northern Missouri, southern Illinois, eastern Ohio, and western Pennsylvania have, in general, rather heavy and slightly sour soils.

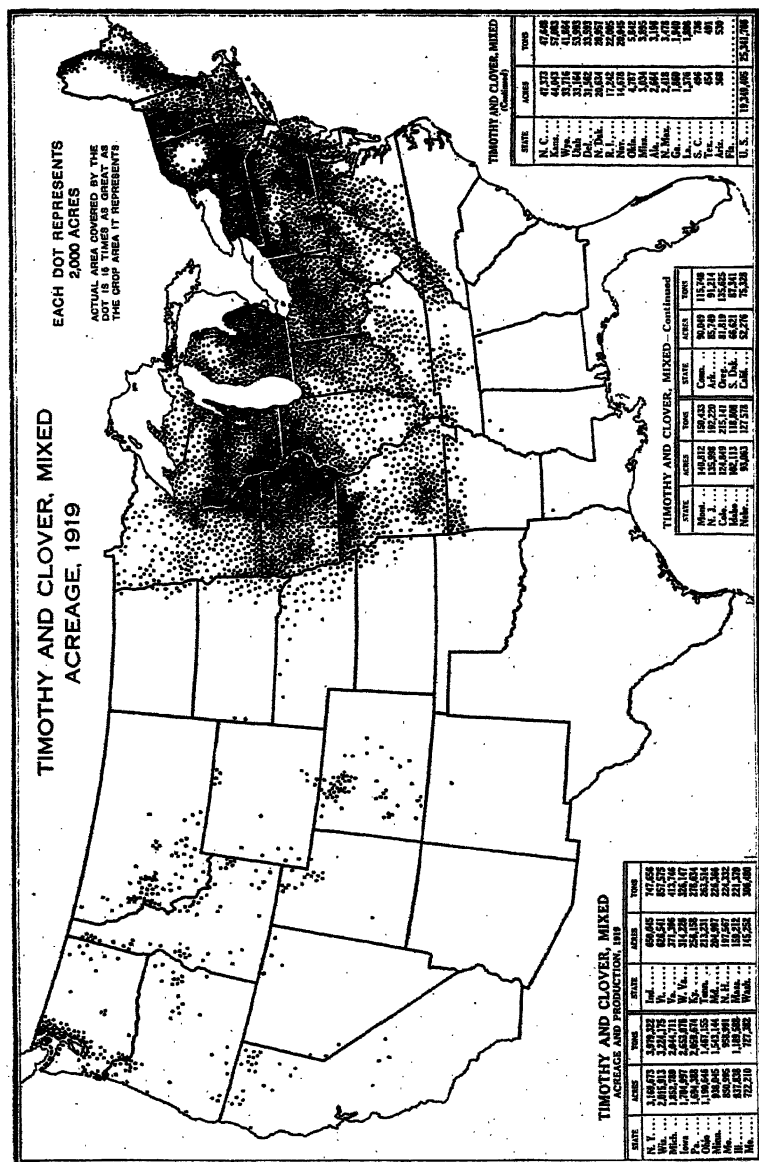


FIG. 40.—The acreage of timothy and clover mixed extends a little farther south and is somewhat more important in the West, especially in the North Pacific Region, than that of timothy alone. Clover is not as well adapted as timothy to heavy or soft soils, consequently, timothy and clover mixed is more important on the better soils—in southeastern Pennsylvania, western Ohio, southern Michigan, northwestern Illinois, and Iowa. In these sections timothy and clover commonly constitute the third year and sometimes the fourth year also, in a rotation, following corn and wheat or oats. About two-thirds of the acreage of timothy and clover mixed is in the Hay and Pasture Region. Compare with map of cotton acreage (Fig. 22) and of clover (Fig. 43).

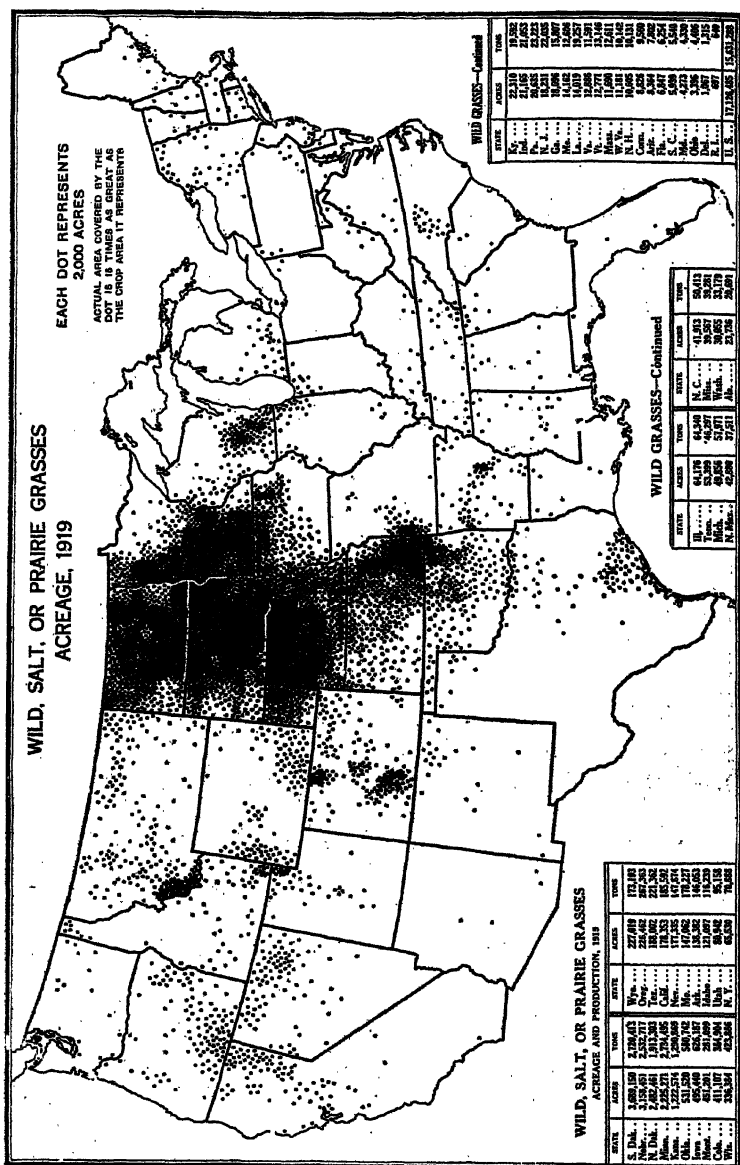


FIG. 41.—The acreage of wild or prairie hay is found mostly in the Spring Wheat Area, the western margin of the Corn Belt, and Corn and Winter Wheat Region, and the eastern portion of the Great Plains; in brief, in the northern part of the subhumid belt. East of this belt the moister climate permits the cultivation of timothy and clover, which are more productive (see Figs. 39 and 40); and west of this belt the climate is so dry that the grass normally does not grow high enough to cut (see Figs. 4 and 7). The acreage shown in Wisconsin is mostly marsh hay and that in the Western States is located largely in moist mountain valleys or on high plateaus (see Fig. 8).

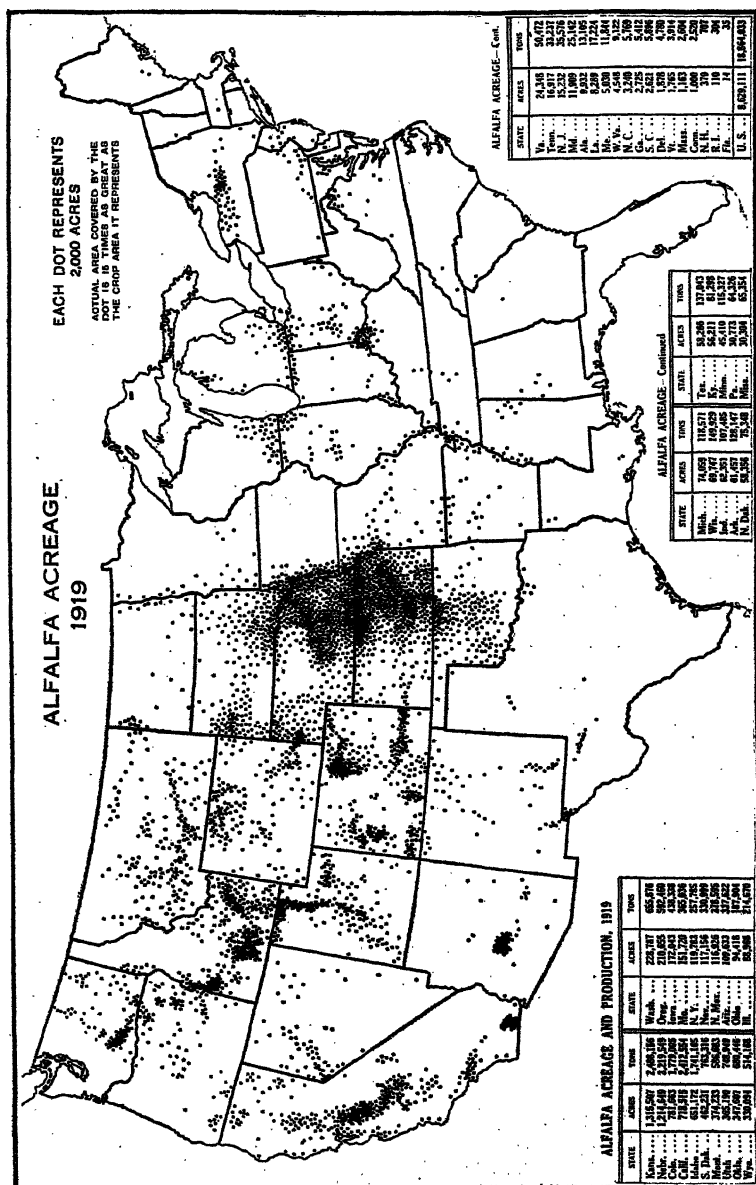


FIG. 42.—Alfalfa demands soils that are not acid, and it is most easily cured in a climate that is not rainy during the summer. Consequently, it thrives best in the Western States, where it is grown mostly under irrigation, and fairly well in the limestone sections of the East, where its culture is increasing rapidly. This increase has been notable in the slightly subhumid section of eastern Kansas and Nebraska, where the acreage has increased over sixfold in the past 20 years. Alfalfa replaces wild hay in this area as the major hay crop. Seven-eighths of the alfalfa acreage is west of the Missouri River (see Figs. 4, 6, and 16).



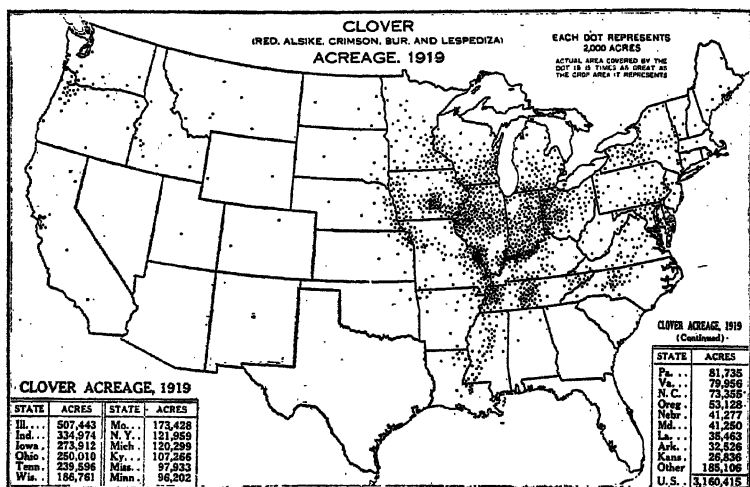


FIG. 43.—This map shows the acreage of clover grown alone (for timothy and clover mixed see Fig. 40). "Clover" may mean red, mammoth, or alsike clover in the Northern and Central States, crimson clover, a very different plant, in the coastal plain of Delaware, Maryland, and Virginia, bur clover in parts of the South, and was specifically stated in the census schedule to include lespedeza. Consequently, the map above, like that of wild hay, includes several different plants, all legumes, however. Most of the clover acreage, it will be noted, is located in the Corn Belt and the Corn and Winter Wheat Region, particularly along the lower Ohio River and up the Mississippi as far as St. Louis. Much of this clover is grown for seed as well as for hay.

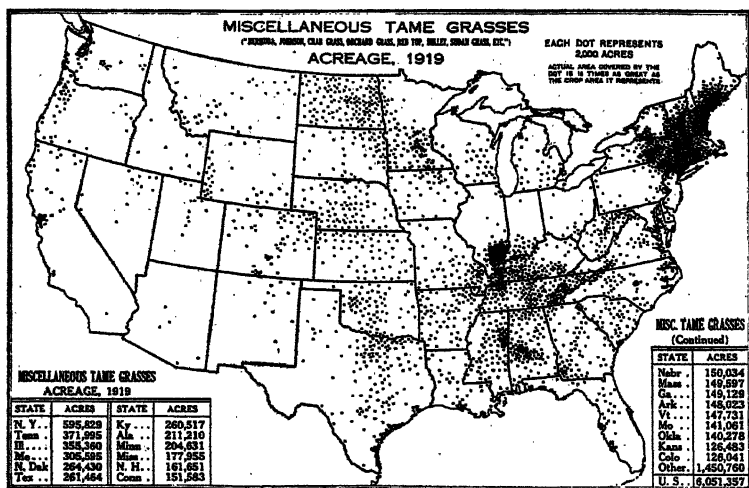


FIG. 44.—This map shows the geographic distribution of the census item entitled "Other tame or cultivated grasses cut for hay." In New England and New York it consists mostly of redtop, quack grass, orchard grass, and Canada blue grass; the dense center in southern Illinois is largely redtop; in the Black Prairie of Alabama and Mississippi, and in general throughout the South, the dots represent Bermuda and Johnson grass principally; while in eastern Tennessee orchard grass and tall rye grass probably constitute most of the acreage shown. The scattered acreage in the States from North Dakota to Texas is almost wholly millet, Sudan grass, or amber cane.

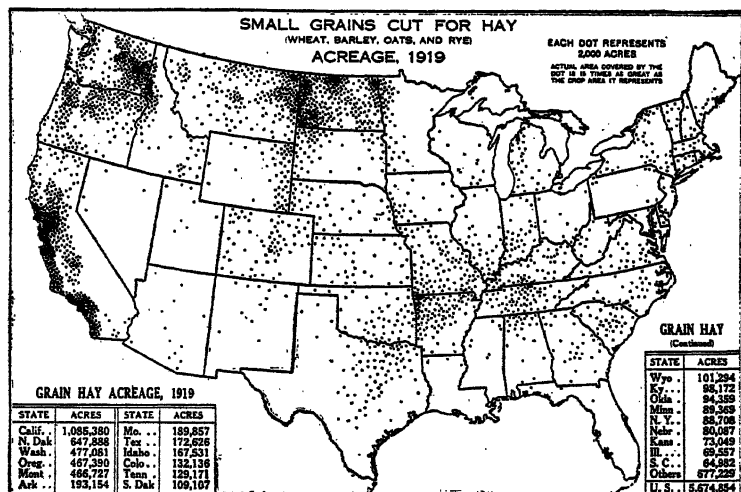


FIG. 45.—The small grains—barley, oats, wheat, and occasionally rye—are cut green for hay, mostly in the Pacific Coast States, where a hay crop is needed which will grow quickly during the cool, moist winters, and which need not survive the long summer drought. In California barley mostly is used, but in Washington and Oregon wheat and oats are more commonly cut for hay. The large acreage shown in North Dakota and eastern Montana is mostly wheat, and is doubtless larger than usual owing to the dry season which caused the crop in much of this area to be scarcely worth threshing.

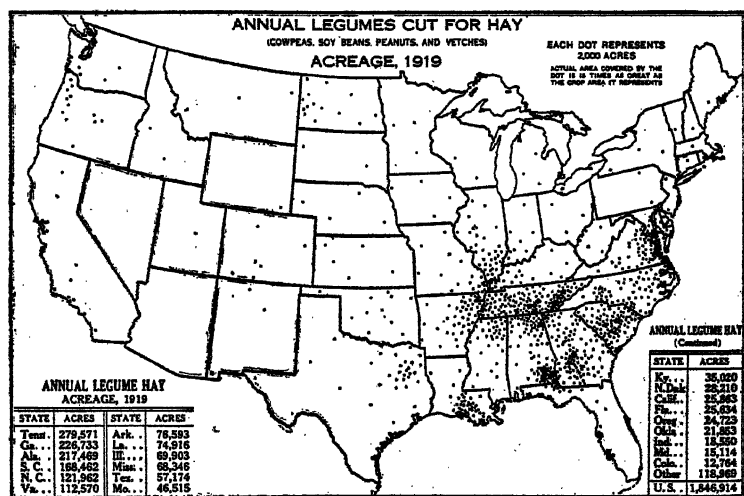


FIG. 46.—“Annual legumes cut for hay” was a new item in the 1920 census schedule, which revealed that nearly 2,000,000 acres of cowpeas, soy beans, and peanuts are cut for hay, mostly in the southeastern quarter of the United States. The dense center in southeastern Alabama and the more widely distributed acreage in Tennessee consist principally of cowpeas. The thinly scattered dots in the North and West are mostly soy beans, except in the North Pacific Region, where vetches are frequently grown for hay. Soy beans can be grown in a much cooler climate than cowpeas or peanuts, and are quite drought resistant.

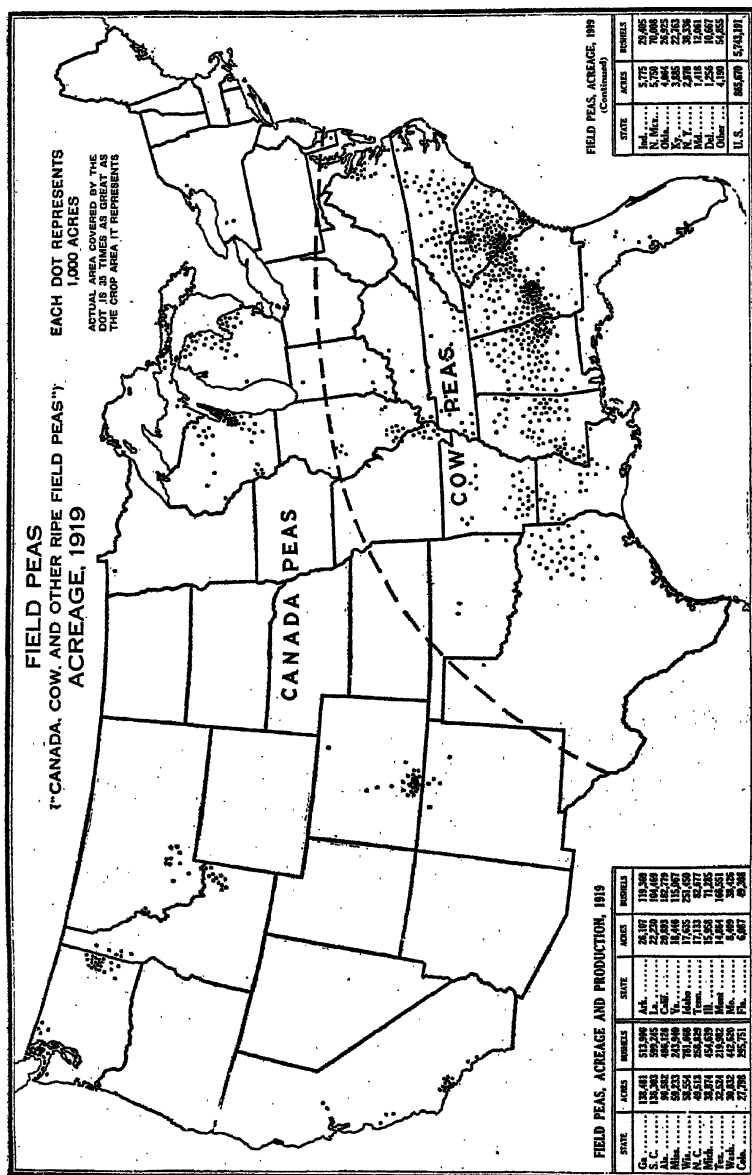


FIG. 47.—This map shows only the acreage of peas allowed to ripen for grain or seed. The acreage of green garden peas, even when grown in the field for canning, is shown in Figure 56. Peas cut for hay or forage are included in "Annual Legumes," Figure 46. Cowpeas, which are more like a bean than a pea, are of importance as a seed crop only on the Piedmont and Upper Coastal Plain of the South, extending as far north as Maryland and central Illinois. Canada peas, which thrive only in a cool climate, are grown mostly in Wisconsin, especially on the heavy soils of the Door Peninsula, in northeastern Michigan, and in the higher or cooler districts of the Rocky Mountain Region.

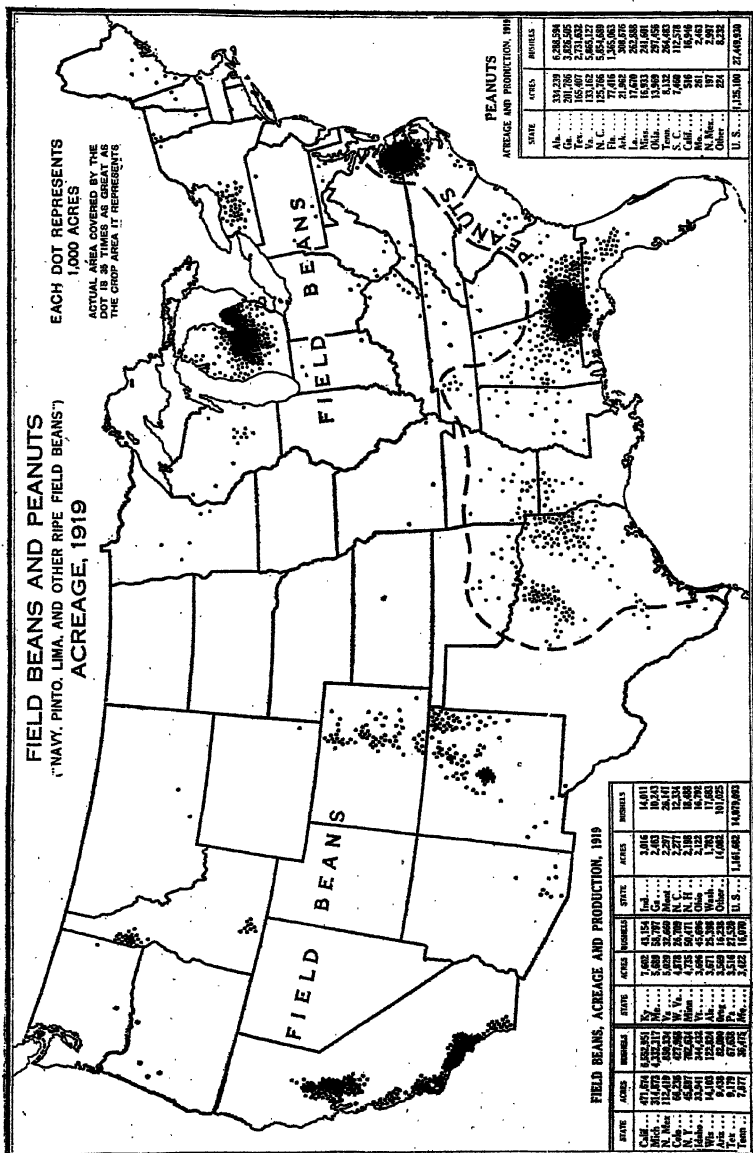


FIG. 48.—Field beans are produced principally in five areas—in western New York and central Michigan, where the leading varieties are white pea, white medium, and red kidney; on the high plains of New Mexico and eastern Colorado, where the native Mexican or pinto bean mostly is grown; in California, where practically the entire commercial crop of limas and nearly half of the crop of white beans is raised; and in Idaho, where both the white and Mexican, also various other varieties, are grown and shipped to all parts of the United States to use as seed.

The acreage of peanuts shown on the map does not include the crop "hogged off" by stock. The peanuts for human consumption are grown mostly in the North Carolina-Virginia district; those grown in Georgia and Alabama are largely fed to hogs or made into peanut butter.

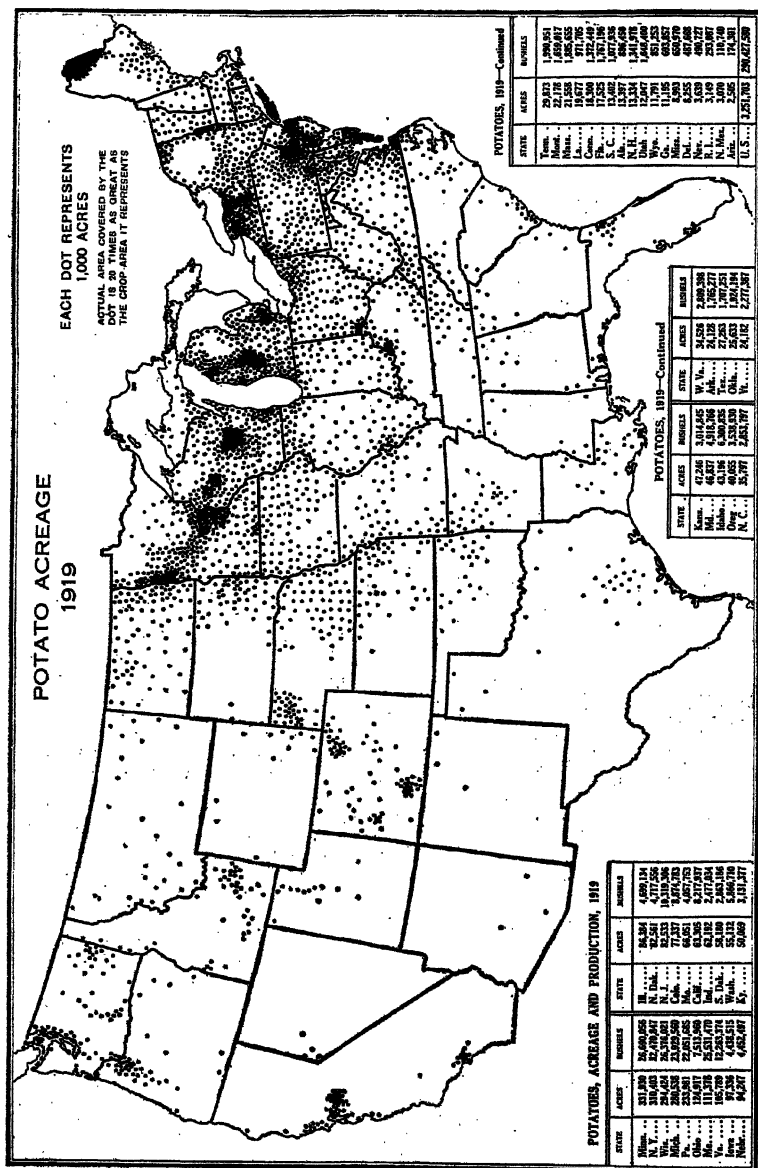


FIG. 49.—The regions of heaviest potato production lie to the north of the Corn Belt. This is due partly to the fact that the quality and yield of potatoes are better in regions of cool climate, and partly to the fact that corn, which requires labor at the same time, is very productive and gives a greater return. Many of the large centers of potato production are in regions of sandy or loamy soils—Aroostook County (Me.), Long Island, New Jersey, eastern Virginia, western Michigan, central Wisconsin, and Anoka County (Minn.). Many of the minor centers of production are located near large cities, since potatoes are a bulky crop, expensive to transport, and can be sold at a profit by local gardeners and farmers in competition with the crop from the large production centers.

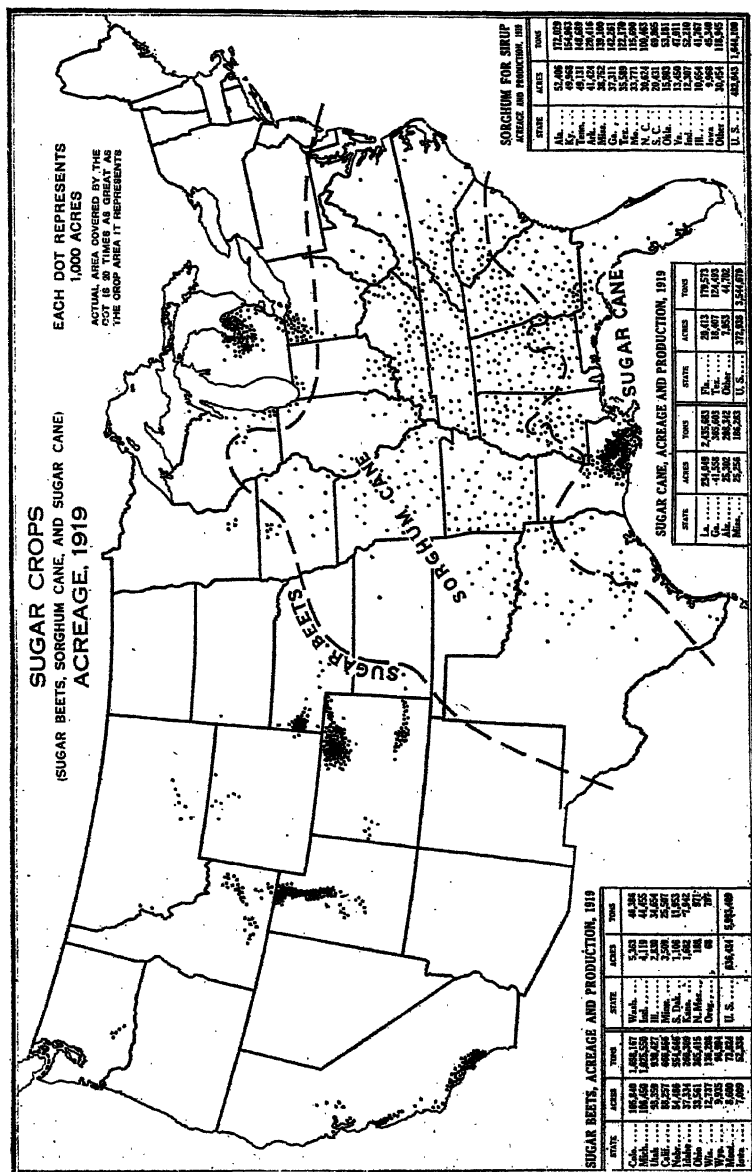


FIG. 50.—The two more important commercial sugar crops are cane and beet. The acreage of sorghum cane is greater than that of sugar cane, but the sirup is mostly made from the sorghum on the farm and does not enter into commerce. Sugar beets do not, in general, show a sufficiently high sugar content to be manufactured profitably where the summer temperature is over 72°, and the beets must also then compete with corn for the farmer's labor. Sugar cane is not grown commercially for sugar outside of the almost frost-free lower Mississippi Delta of Louisiana. The broad belt between the sugar-beet and sugar-cane areas is occupied by a thin and scattered acreage of sorghum cane.

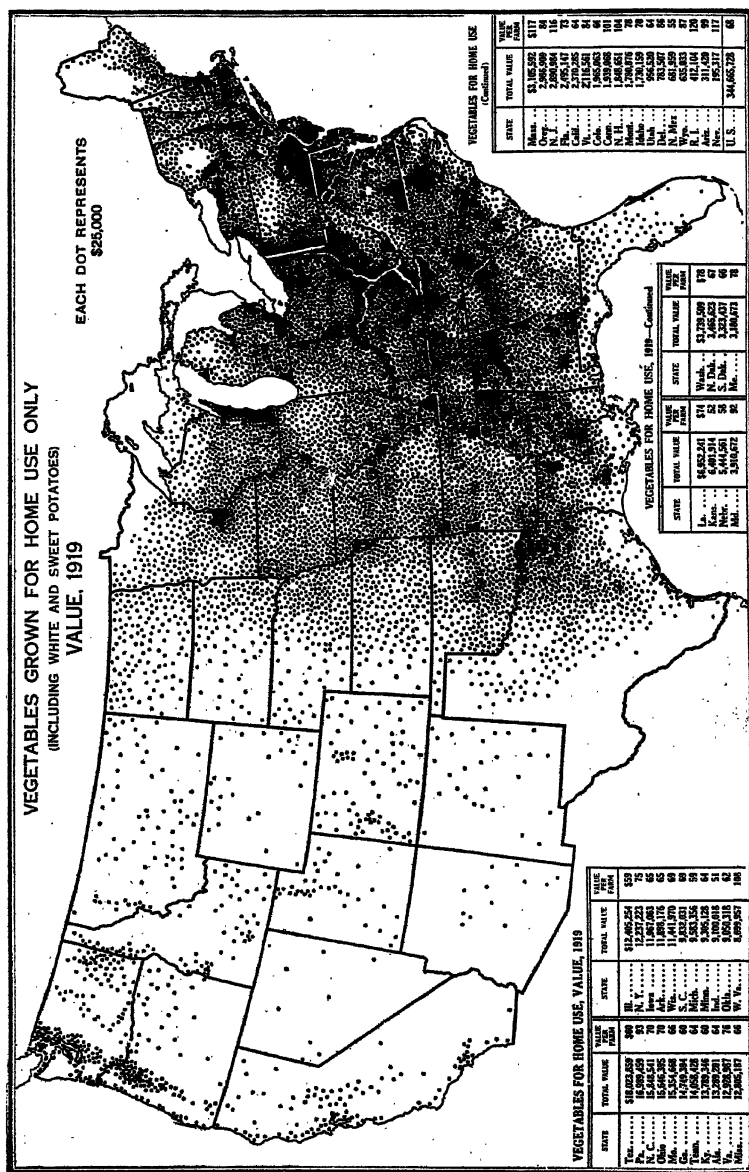


FIG. 51.—The census of 1920 was the first to separate vegetables grown for home use from those grown for sale. The areas of densest production of vegetables for home use are southeastern Pennsylvania, the upper Ohio Valley, the mountainous districts of eastern Kentucky and Tennessee and of northern Alabama, the upper Piedmont of the Carolinas and Georgia, and much of Mississippi, also the Lake Michigan shore counties of Wisconsin, southeastern Michigan, and central New York—areas of small farms owned by frugal people (see Figs. 98 and 99). The average size of the farm garden, however, is apparently, greatest in Virginia and Massachusetts, about one-half acre, and smallest in the prairie and plains States, about one-fifth acre.

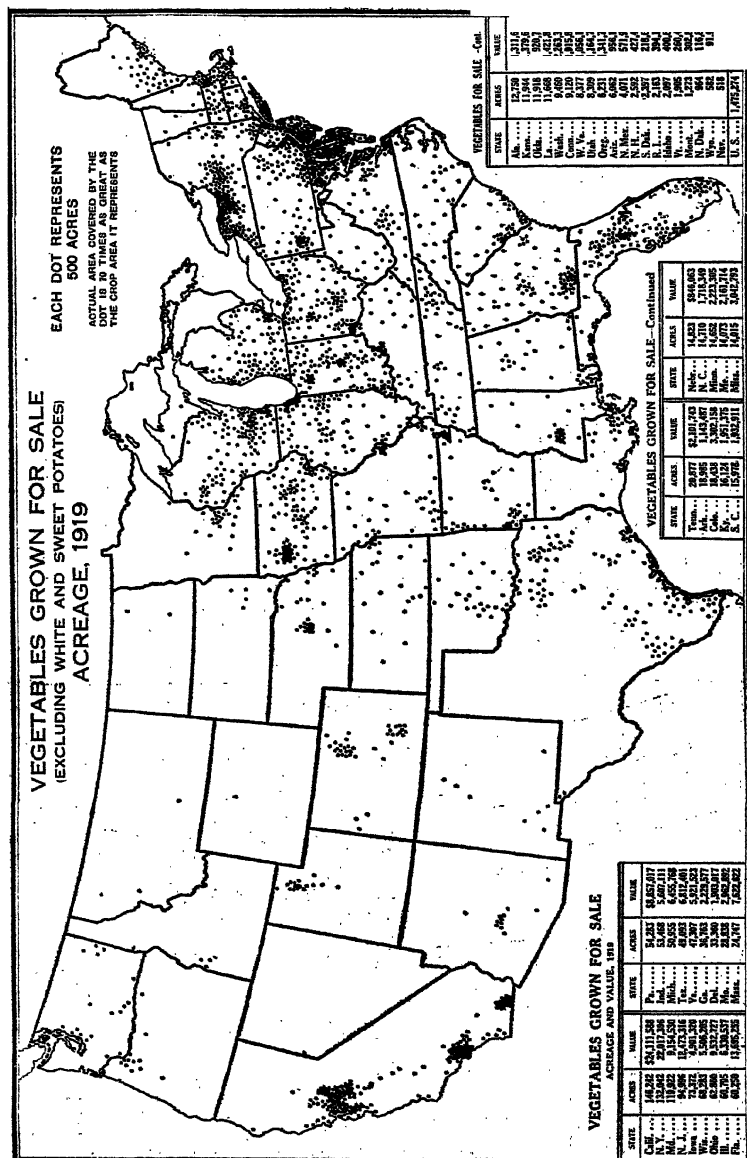


FIG. 52.—The most important area of vegetable production extends from New York City to Norfolk, Va. In this area about one-fifth of the Nation's commercial crop is produced. A second important area extends from Utica, N. Y., west to Buffalo and Erie. Another belt surrounds the southern half of Lake Michigan. Florida and southern Georgia, where perhaps one-third of the winter vegetables are grown, may be said to constitute a fourth area. California possesses three important areas—the Sacramento-Stockton district, the Los Angeles district, and the Imperial Valley. In California also the winter crop is important. Smaller centers of production adjoin most of the large cities. The centers shown in western Iowa and Nebraska represent pop corn.



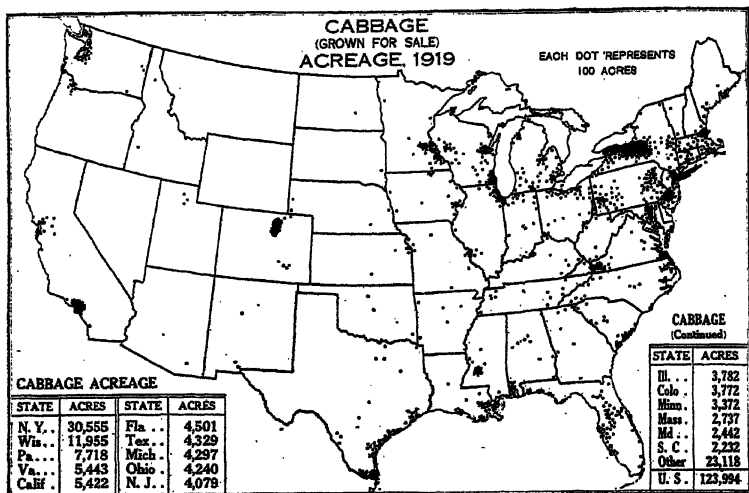


FIG. 53.—The principal cabbage-producing districts are in the North, the largest being the belt of counties in New York from Buffalo to Syracuse. In this district nearly one-quarter of the Nation's acreage is found, mostly on the muck lands and the Clyde series of soils. Other important districts are Long Island, N. Y.; Burlington and Gloucester Counties, N. J.; around Norfolk and in Wythe County, Va.; along Lake Michigan from Chicago to Milwaukee; in Green Bay County, Wis.; around Denver, Colo., and Los Angeles, Calif. Early cabbages are raised mostly in Florida, in the Young's Island (S. C.) district, in Copiah County, Miss., and in southern Texas.

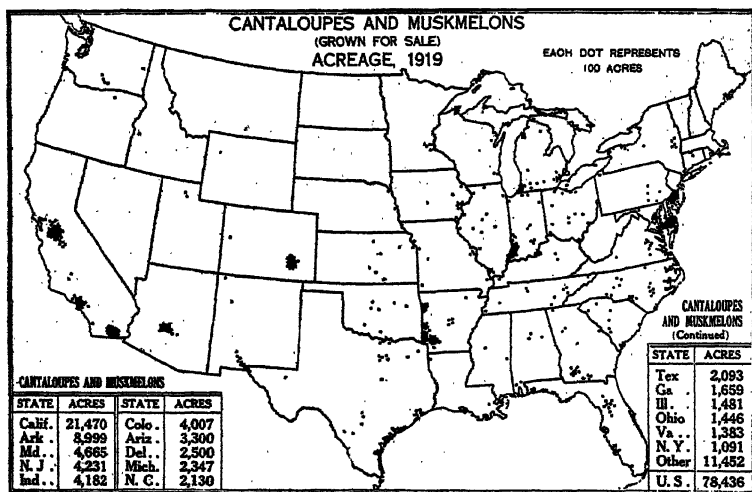


FIG. 54.—The principal cantaloupe-producing districts are now located in the West, California having over one-quarter of the Nation's acreage. The most important western districts are in Stanislaus (Turloc district), Los Angeles, and Imperial Counties, Calif.; in the Salt River Valley (Phoenix district) of Arizona; and the Arkansas Valley (Rocky Ford-Ordway district) of Colorado. In these five districts nearly 40 per cent of the Nation's acreage was found in 1919. Arkansas ranked next to California in acreage, the principal districts being located in Hempstead and Sevier Counties. Other important districts are Gibson and Knox Counties in Indiana, Sussex in Delaware, Gloucester in New Jersey, and Mitchell County (Polham district), Ga.

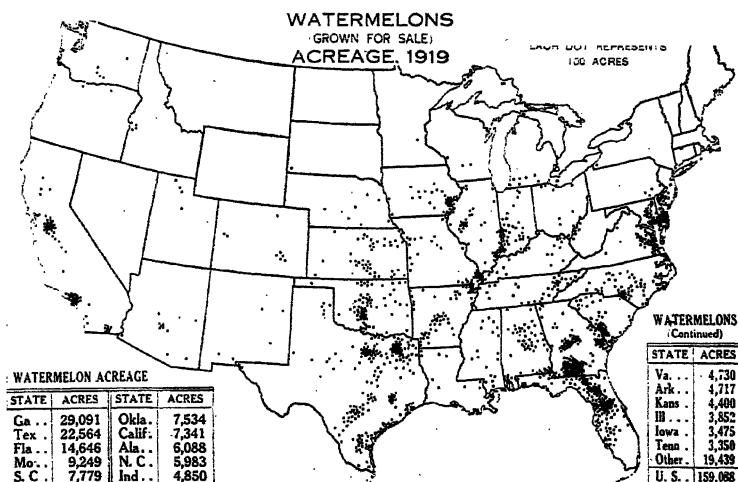


FIG. 55.—The principal watermelon-producing districts are in the South, Georgia and Texas having nearly one-third of the Nation's acreage. The most important districts in Georgia center around Valdosta and Thomasville, and in Texas around Sulphur Springs. Florida ranks next in importance, but the acreage is more scattered. There is an important center in Barnwell and Hampton Counties, S. C., in Scotland County, N. C., and a less dense acreage along both shores of Chesapeake Bay in Virginia and Maryland. Dunklin and Scott Counties in southeastern Missouri are other important districts, also Grady County, Okla., and Stanislaus and Los Angeles Counties, Calif.

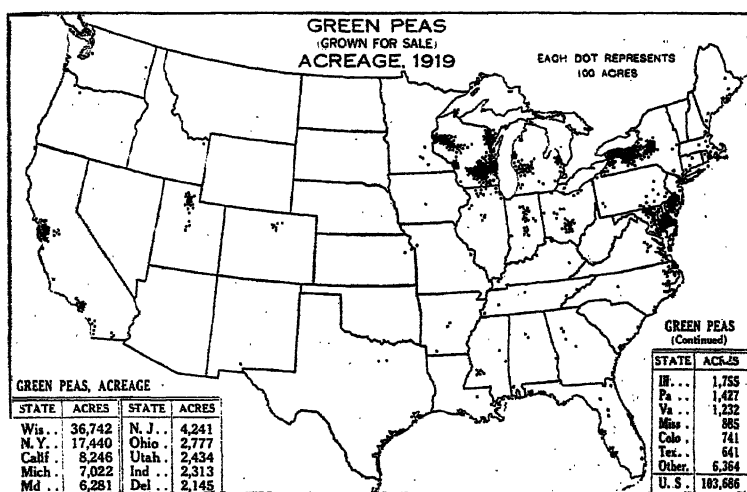


FIG. 56.—Green peas, like cabbages, are a cool-climate crop, but in pea production Wisconsin is more important than New York, having, indeed, one-third of the Nation's acreage. The Wisconsin districts include Columbia, Dodge, Green Lake, Sheboygan, and Washington Counties in the southeast, Barron and Chippewa Counties in the northwest, and Marinette and Oconto in the northeast. The New York district, which ranks next in importance, extends from Buffalo to Utica. Eastern Maryland and Delaware rank third in importance, followed by California (San Francisco Bay district) and Michigan. A small acreage is found in southern New Jersey, and in the Salt Lake district and Jordan Valley of Utah.

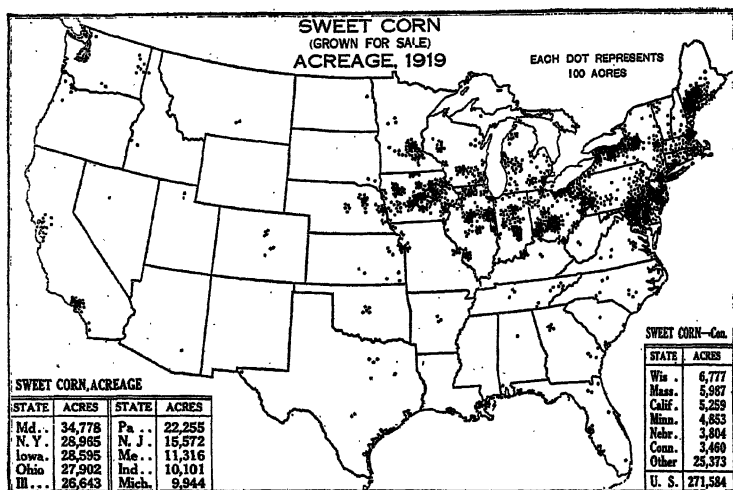


FIG. 57.—Sweet corn is primarily an eastern, middle-latitude crop, but it is extensively grown also in New York and New England, owing in large measure to the excellent quality produced, and the fact that it need not mature. Maryland ranks first in acreage, followed by New York, Iowa, Ohio, Illinois, and Pennsylvania in close succession. New Jersey, relative to its area, has a large acreage. The acreage in these States is concentrated in a few counties, as can be seen on the map. It is interesting to note that although there is almost no corn grown for grain in Maine or California (see Fig. 24), there is a considerable acreage of sweet corn in these States.

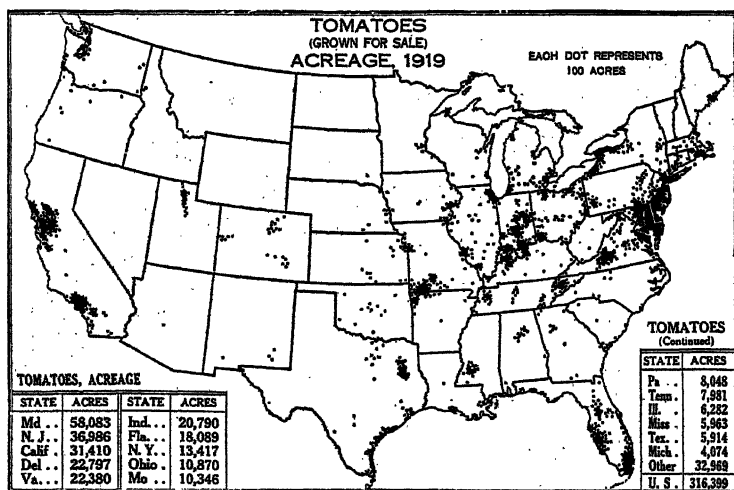


FIG. 58.—Tomatoes are grown for sale in almost all parts of the United States, except in the Spring Wheat, Northern Great Plains and Arid Intermountain Plateau regions. The eastern Maryland, Delaware, and southern New Jersey districts include over one-third of the Nation's acreage, and the Los Angeles and San Francisco Bay districts in California about one-tenth. Virginia and Indiana rank next in importance, followed by Florida, which produces most of the winter crop. Other important early-tomato districts are located in Copiah County, Miss., and Cherokee County, Tex. Tomatoes lead all the vegetables grown for sale in the United States (other than potatoes and sweet potatoes), both in acreage and value.

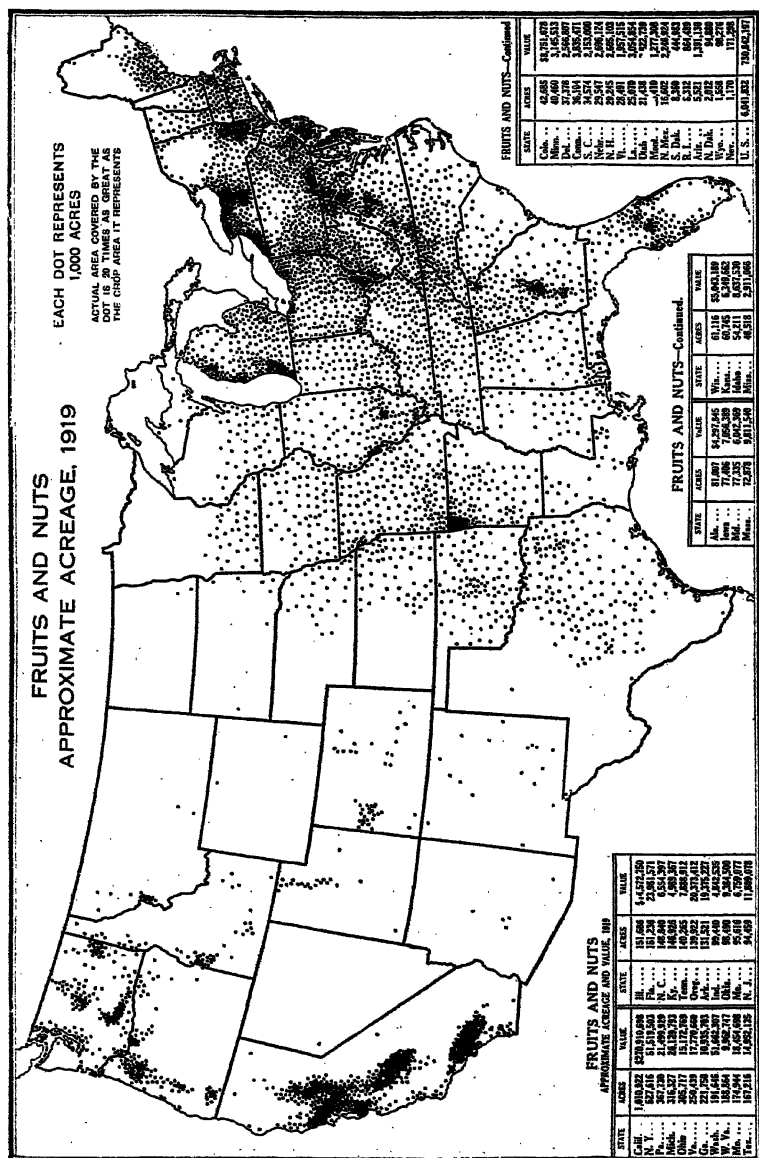


FIG. 59.—California contributed over one-sixth of the Nation's acreage of fruits and nuts in 1919 and over one-third of the value. The district in southern California consists mostly of citrus fruits, walnuts, and apricots (see figs. 63 and 69); the central (San Joaquin Valley) district, of raisin grapes, peaches, and apricots, with some citrus fruits in the eastern foothills (figs. 64, 65, 67, and 68); and the northern districts of peaches and apricots, plums and prunes, grapes, walnuts, and almonds, with apples near the cool coast, and pears in the foothills. The dots in Florida represent mostly citrus fruits, those in the cotton belt, especially Georgia and Texas, peaches mostly and pecans; elsewhere in the United States, with few exceptions, the apple is the dominant fruit (figs. 60, 61, 62, and 63).

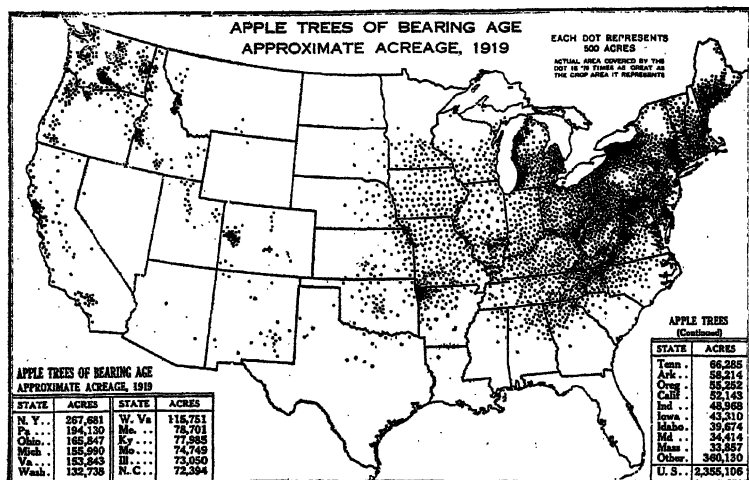


FIG. 60.—About 15 per cent of the acreage of apple trees of bearing age was in the West in 1920, and nearly half of this western acreage was in the State of Washington. New York, Pennsylvania, Ohio, Michigan, and Virginia, however, exceeded Washington in acreage. Most of the apple acreage of the Nation is found in the Hay and Pasture Region from Maine to West Virginia and Michigan, where the climate is cool, but owing either to lake or mountain protection, the winters are moister and less severe than in the interior of the continent. The southern limit of the apple area extends only a little beyond the northern limit of cotton, and the western, or moisture limit, is about that of timothy (see Figs. 22 and 39).

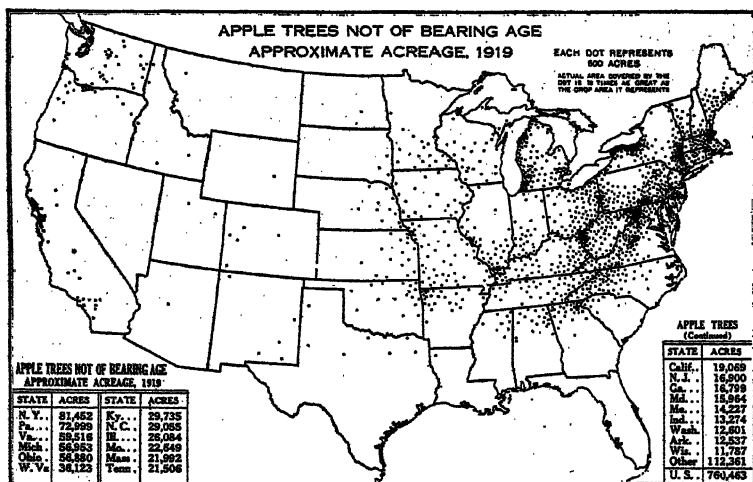


FIG. 61.—There has been very little planting of apple orchards in the West in recent years, the higher freight rates increasing the difficulties of competition with eastern-grown fruit. Less than 9 per cent of the apple trees not of bearing age were in the West in 1920. Most of the acreage of young trees, it will be noted on the map, is located along the shore of Lake Ontario in New York, in the lower Hudson Valley, in New England, along the Appalachians from Pennsylvania to Georgia, in the upper Ohio Valley, along the Lake Michigan shore of Michigan, and in the Sonoma Valley of California. Trees not of bearing age numbered 36 million in 1920 as compared with nearly 66 million in 1910.

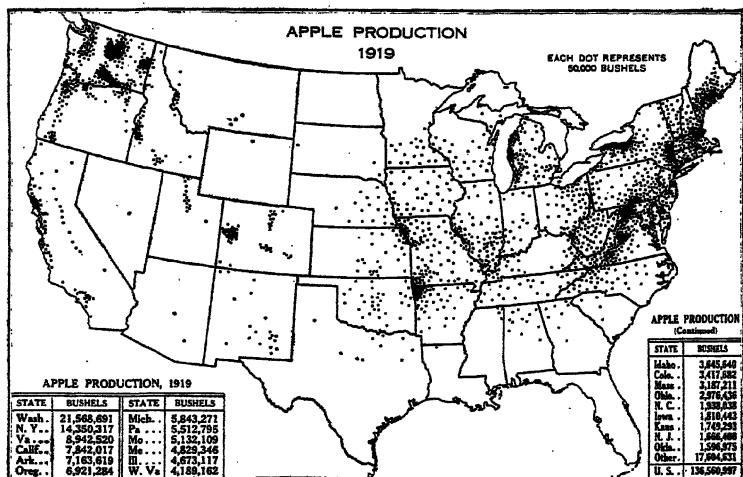


FIG. 62.—The West produced one-third of the apples grown in 1919 despite the fact that it possessed only one-seventh of the acreage of bearing trees. Washington led all States in production, with a total almost equal to that of New York and Virginia combined. The three famous apple districts of Washington—the Yakima Valley, the Wenatchee Valley, and Spokane County—stand out clearly on the map; also the Hood River and Willamette Valleys of Oregon, the Boise, Idaho, district, the Sonoma Valley in California, and the Grand Junction-Delta-Montrose district of Colorado. In the East, the New England area, the two noted New York districts, the Appalachian, the western Michigan, the Ozark, and the northwestern Missouri districts are the most important.

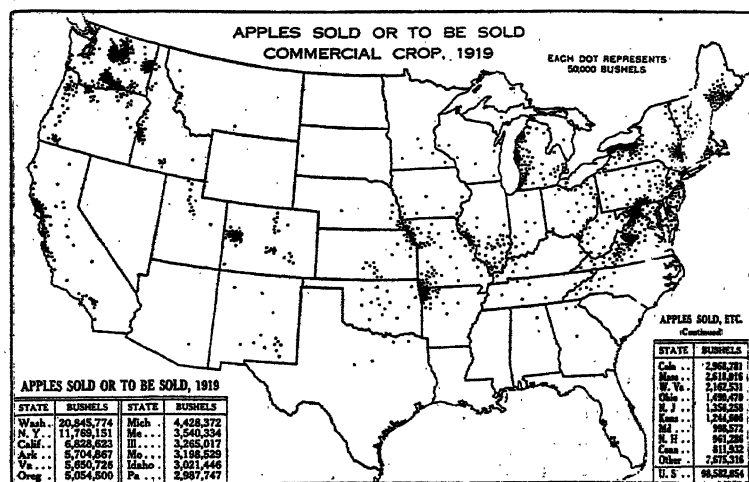


FIG. 63.—The commercial crop of apples in 1919—that is, the quantity "sold or to be sold"—was nearly 100 million bushels, according to the census, constituting three-fourths of the total crop. The West produced over two-fifths of this commercial crop, Washington alone reporting over one-fifth of the total quantity in the United States. Eighty per cent of the commercial crop was produced in the 15 apple districts already referred to. It will be noted that the production of the commercial crop of apples is more concentrated than the total production, and the total production in turn, more concentrated than the acreage. Diseases and pests diminish the production of the unsprayed home orchards several years before they kill the trees.

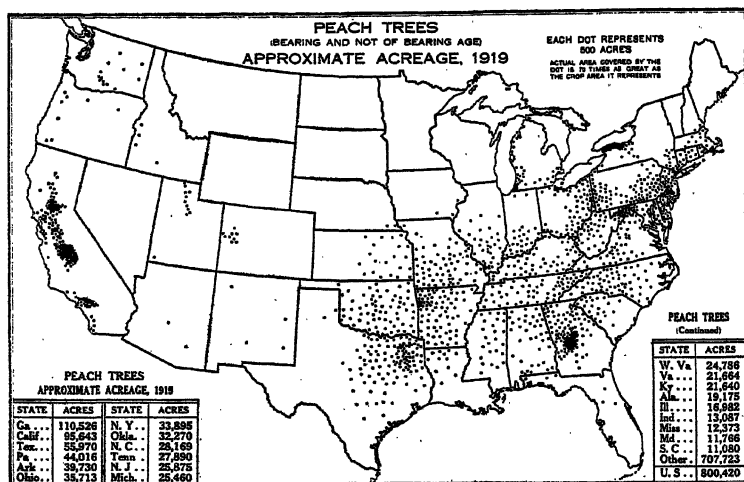


FIG. 64.—Three major centers of peach acreage are shown on the map—the early peach district in central Georgia, the late peach district along Lake Ontario in New York, and the canning and dried peach districts in California. An important peach district is rapidly developing in Moore County, N. C. Minor centers may be noted in southern New Jersey, in western Maryland and adjacent counties of West Virginia, along the Michigan shore of Lake Michigan, in western Arkansas, and in northeastern Texas. Cold, dry winters prevent peaches being grown to the northwest of a line drawn from Chicago to Omaha, thence to Amarillo, Tex. The influence of the Great Lakes in tempering winter temperatures on their leeward shores and retarding growth in spring till danger of frost is past is evident on the map.

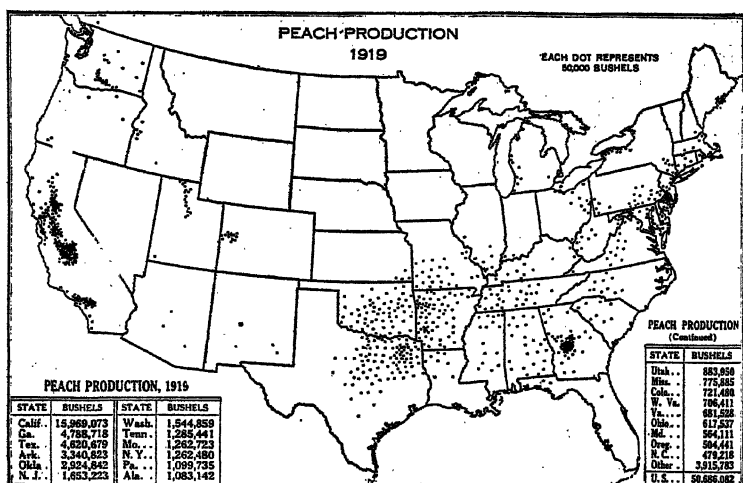


FIG. 65.—California produced nearly one-third of the Nation's crop of peaches in 1919, Fresno County alone producing one-tenth. Georgia ranked second, with Texas a close third. The New York crop was greatly reduced by a late freeze, but the New Jersey crop was large. It is worth noting that the production of peaches this year did not extend nearly as far to the north and west as the acreage. The Yakima Valley in Washington, the peach belt east of Great Salt Lake in Utah, and the Grand Junction-Delta district in Colorado show a production disproportionate to the acreage. The season of 1919 was generally favorable. Although the number of bearing peach trees in the United States dropped from 94 million in 1910 to 65 million in 1920, the production was 40 per cent. greater in 1919 than in 1909.

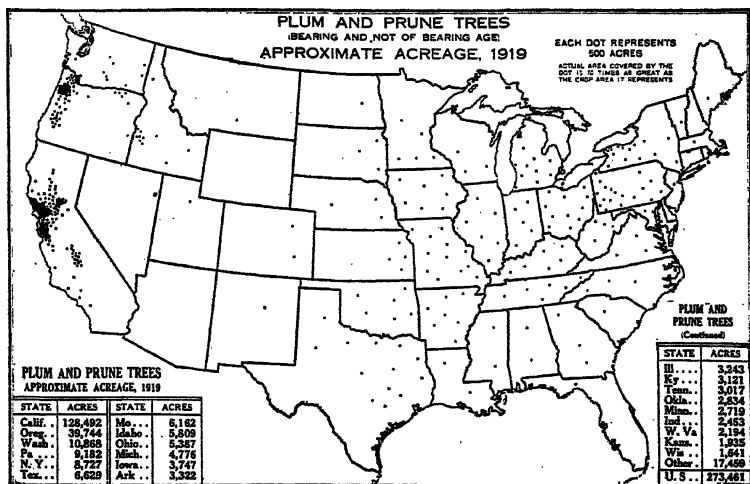


FIG. 66.—Nearly half of the Nation's acreage of plum and prune trees is in California, and nearly a third is in the five counties of Santa Clara, Sonoma, Placer, Napa, and Solano. One-twelfth more is in Marion, Polk, and Yamhill counties, Oreg. These eight counties produced 51 per cent of the total crop in 1919, and 57 per cent of the commercial crop. A smaller center may be noted in Clarke County, Wash., and a scattered acreage in the upper Willamette and Umpqua Valleys, Oreg., in the Sacramento Valley and in Fresno County, Calif. Prunes constitute nearly the entire production in these States. The scattered dots in the eastern half of the United States are practically all plums.

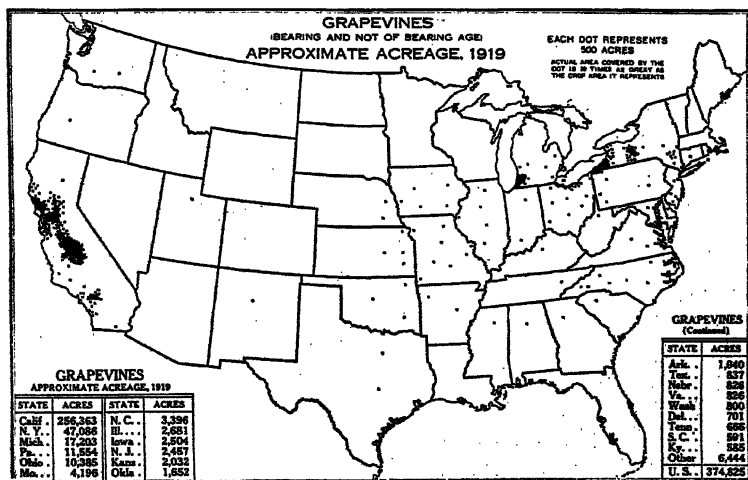


FIG. 67.—Two-thirds of the Nation's acreage of grapes is in California. The raisin district centers around Fresno, where the land is flat and the sunshine almost continuous, while the wine grapes are grown mostly on the slopes of the valleys that open into San Francisco Bay. These wine grapes are now used largely for raisins. A smaller center may be noted in southern California near San Bernardino. In the East the principal grape district extends along the southern shore of Lake Erie from Erie to Buffalo. Minor centers may be seen in the Finger Lakes district of New York, the south shore of Lake Erie in Ohio, and in the southwestern corner of Michigan. These eastern grapes are mostly consumed fresh or made into grape juice.



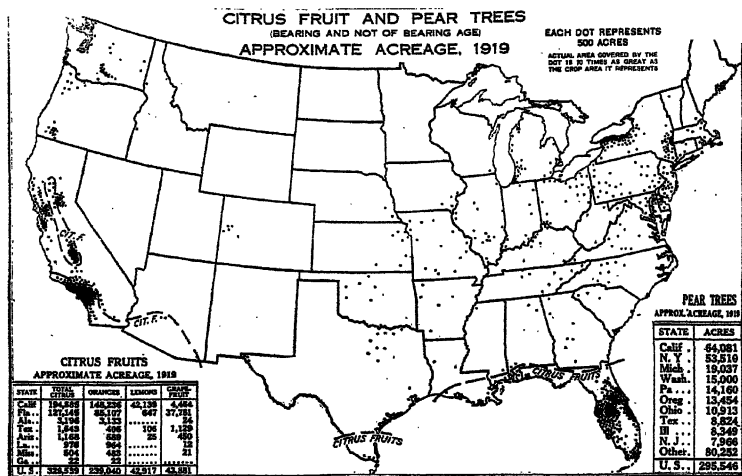


FIG. 68.—Citrus fruits can withstand only a few degrees of frost. About three-fifths of the acreage is in California and nearly two-fifths in Florida. There are a few orchards in the Mississippi Delta in Louisiana, in the Brownsville, Tex., district, and near Phoenix, Ariz., and recently hardy Satsuma orange trees have been planted along the Gulf coast in eastern Texas, southern Mississippi, and Alabama. Lemons are practically confined to California, grapefruit largely to Florida, while oranges are grown in both States.

The principal pear districts are the Ontario shore counties and the Hudson Valley of New York, southwestern Michigan along the lake, the foothills of central and southern California, western Oregon, and the Yakima Valley of Washington.

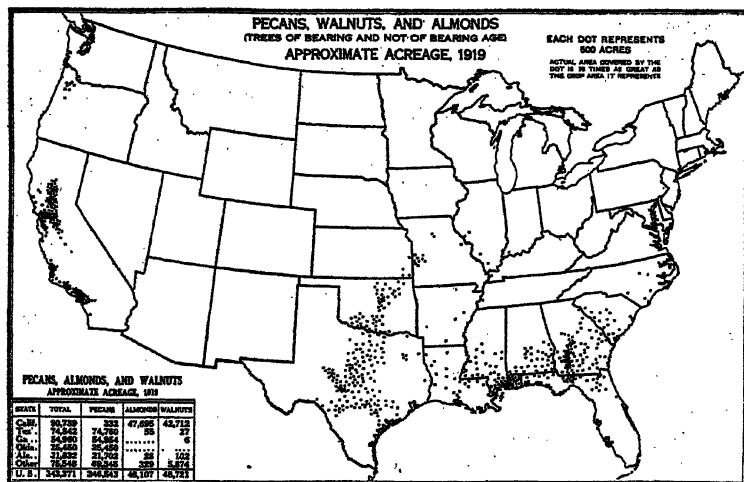


FIG. 69.—Only three kinds of nuts are produced on a commercial scale in the United States—pecans, walnuts, and almonds. The pecan is native to the lower Mississippi Valley, and the largest acreage is found in a belt which extends from central Missouri across Oklahoma to south-central Texas. Recently extensive planting of pecan trees has taken place on the coastal plain in Georgia, the Carolinas, Alabama, Mississippi, and northern Florida. Almonds and walnuts have been introduced from the Mediterranean region and their production is practically confined to California, except for a considerable acreage of walnuts in the Willamette Valley of Oregon and adjoining counties in Washington.

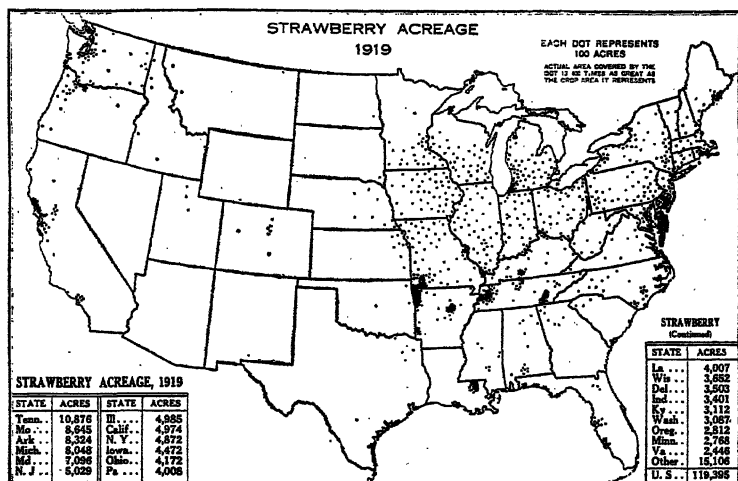


FIG. 70.—The commercial production of strawberries has become concentrated in unusual degree in a few centers, notably, in Cumberland, Camden, Burlington, and Atlantic Counties, N. J.; Sussex County, Del.; Wilcomico, Worcester, Caroline, and Anne Arundel Counties, Md.; in Hamilton, Rhea, Crockett, Gibson, Lauderdale, and Madison Counties, Tenn.; in Warren County, Ky.; in Barry, Lawrence, McDonald, and Newton Counties, Mo.; and adjacent counties of Washington and Benton in Arkansas; in White County, Ark.; in Tangipahoa Parish, La.; in Berrien County, Mich.; in Sonoma, Sacramento, and Los Angeles Counties, Calif.; and in Hood River County, Oreg. These 30 counties, out of the 3,000 in the United States, contained one-third of the Nation's acreage of strawberries in 1919.

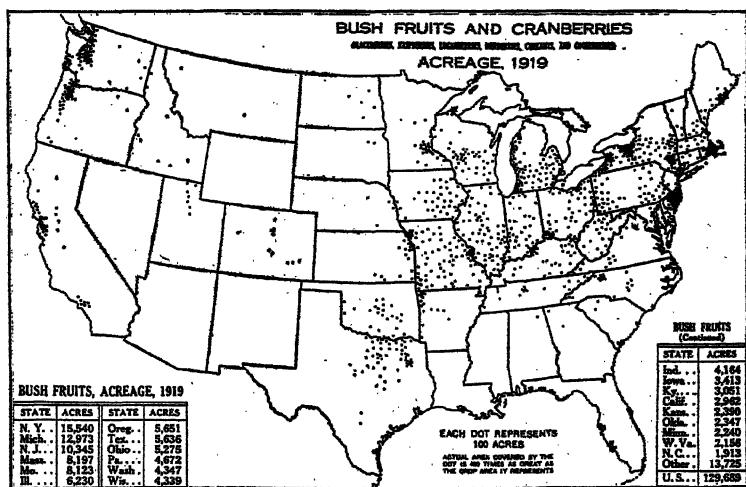


FIG. 71.—The centers of cranberry acreage are Cape Cod Mass., southern New Jersey, and central Wisconsin—all districts of sandy, marshy, acid soils. The centers of bush fruit acreage are southern New Jersey; the Mariboro district in the Hudson Valley of New York; the district east and southeast of Rochester; the belt along Lake Erie from Buffalo to Cleveland; the eastern shore of Lake Michigan, especially Berrien County; the eastern shore of Puget Sound, especially the Puyallup district; and the Willamette Valley in Oregon, especially the district around Salem. This latter district specializes in loganberries grown for canning and bottling. Minor centers may be noted near many of the large cities.

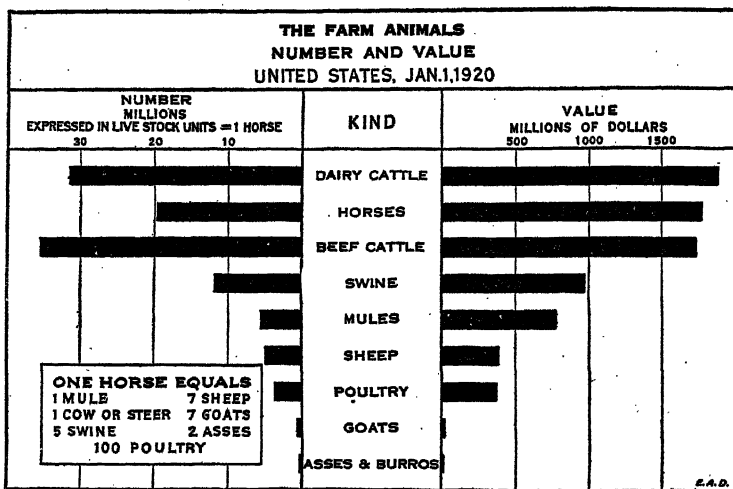


Fig. 72.—Cattle in 1920 constituted the leading class of live stock in the United States on the basis of value. This value was almost equally divided between the dairy and beef types. Between 1910 and 1920 the total value of cattle in the United States increased 143 per cent, due mostly to an increase in value per head of 125 per cent; whereas the value of all horses decreased 14 per cent, due to exactly the same decrease in value per head. Cattle constituted 46 per cent of the value of all farm animals, horses and mules 32 per cent, swine 12 per cent, sheep and goats 5 per cent, and poultry nearly 5 per cent. The swine, however, produce annually pork and lard having a value greater than that of the beef and veal from the cattle.

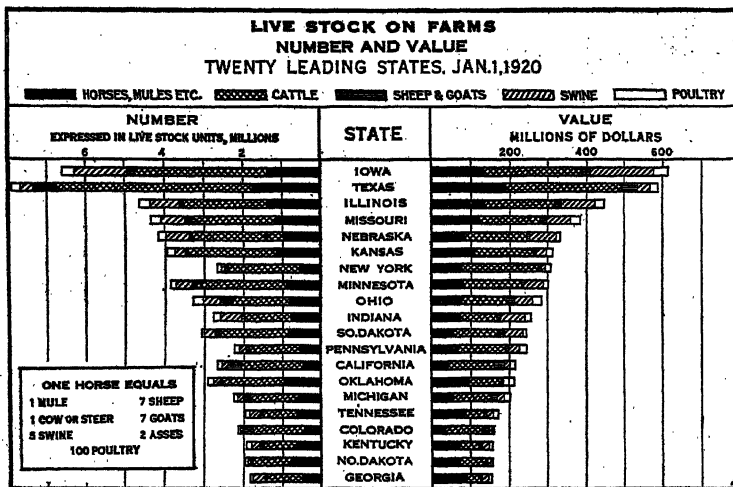


Fig. 73.—Iowa leads the States in value of live stock on farms, but is exceeded by Texas in number of animal units. It is noteworthy that 9 of the 11 leading States in value of live stock are located wholly or partly in the Corn Belt. On the other hand, Georgia is the only State lying almost wholly in the Cotton Belt that is included in this list of 20 leading live-stock States. The concentration of live stock in the Corn Belt, and in the dairying centers of the Hay and Pasture Region is shown in Figure 107. Cattle and horses and mules, it will be noted, constitute in the different States from six-tenths to nine-tenths of the value of all live stock.

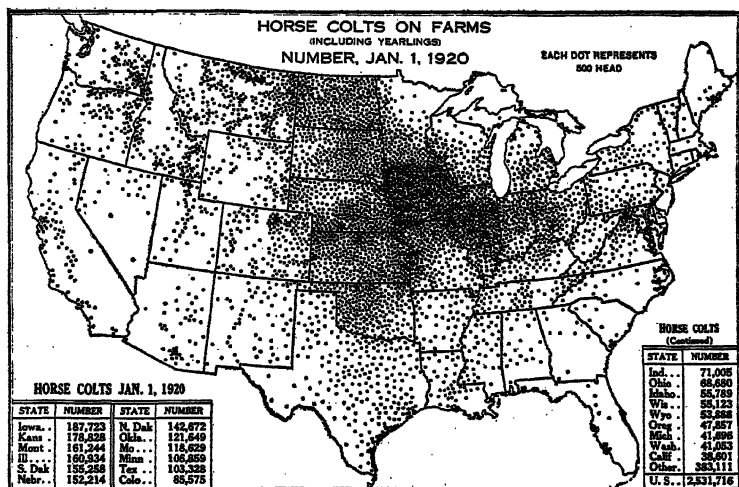


FIG. 74.—One-third of the horses in the United States are raised in the Corn Belt, one-sixth in the Great Plains Region, one-tenth in the Spring Wheat Area, and one-twelfth in the Kansas-Oklahoma section of the Corn and Winter Wheat Region. These are the regions of surplus grain and cheap forage. Comparatively few horses are raised in the Cotton Belt, or the Central and North Atlantic States, because these are regions of deficient grain production and feed must be shipped in at heavy expense. It is more economical to ship the mature horses into these deficiency regions than to ship the grain to grow them. (See Figs. 11, 12, 27, 32, 33, 36, and 41.)

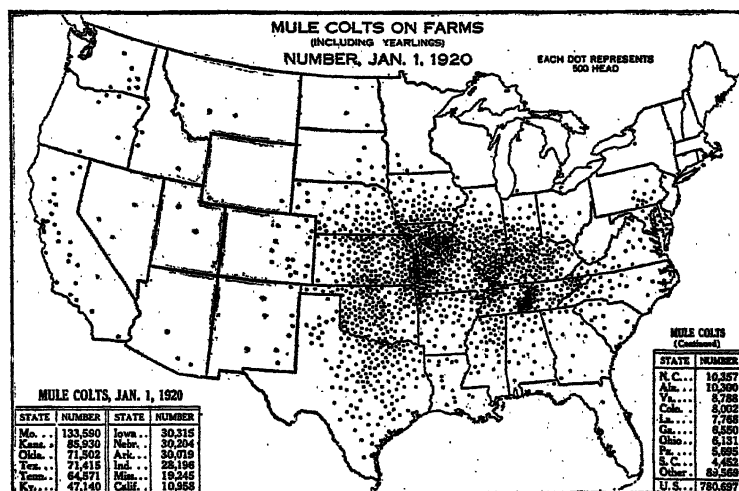


FIG. 75.—Two-thirds of the mules are raised in the western section of the Corn and Winter Wheat Region and the southern portion of the Corn Belt, the centers of production being about 300 miles south of the centers of horse production. This may be due in part to the adaptation of the mule to warmer temperature than the horse, but also in part to the shorter distance and smaller cost of transportation to the Cotton Belt, where most of the mules are sent (see Fig. 77). Formerly Kentucky and Tennessee were the leading States in mule production, but now a much greater number are raised in Missouri, Kansas, and Oklahoma, where feed is cheaper.

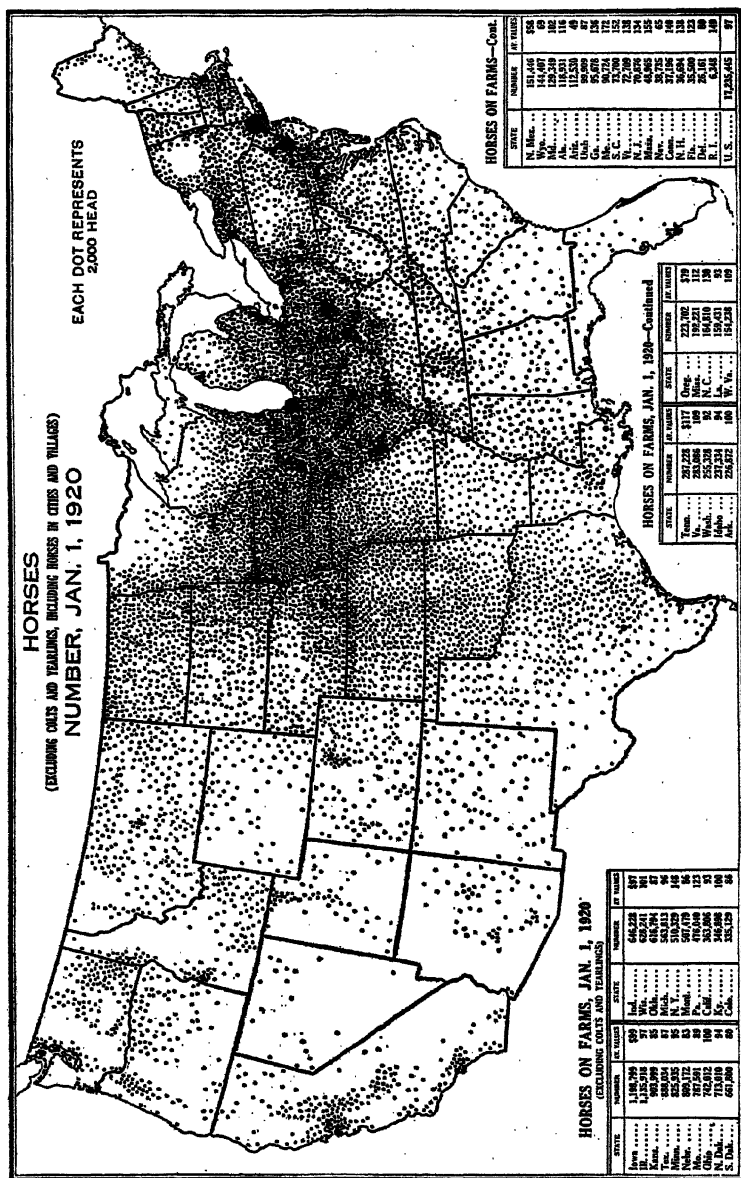


FIG. 76.—Over one-quarter of the mature horses (2 years old and over) in the United States are in the Corn Belt, and over three-quarters are in the humid eastern half of the country. The small number of horses in the Cotton Belt and the eastern sections of the Corn and Winter Wheat Region is owing in large measure to the preference for mules as work animals in these regions (see Fig. 77). The acres of crops per mature horse and mule in the Cotton Belt (17 acres) is practically the same as in the Corn Belt (18 acres), or in the Hay and Pasture Region (16 acres). The number of horses in cities and villages ("not on farms or ranges") was 1,705,611 on January 1, 1920, or about one-tenth the number of mature horses on farms.

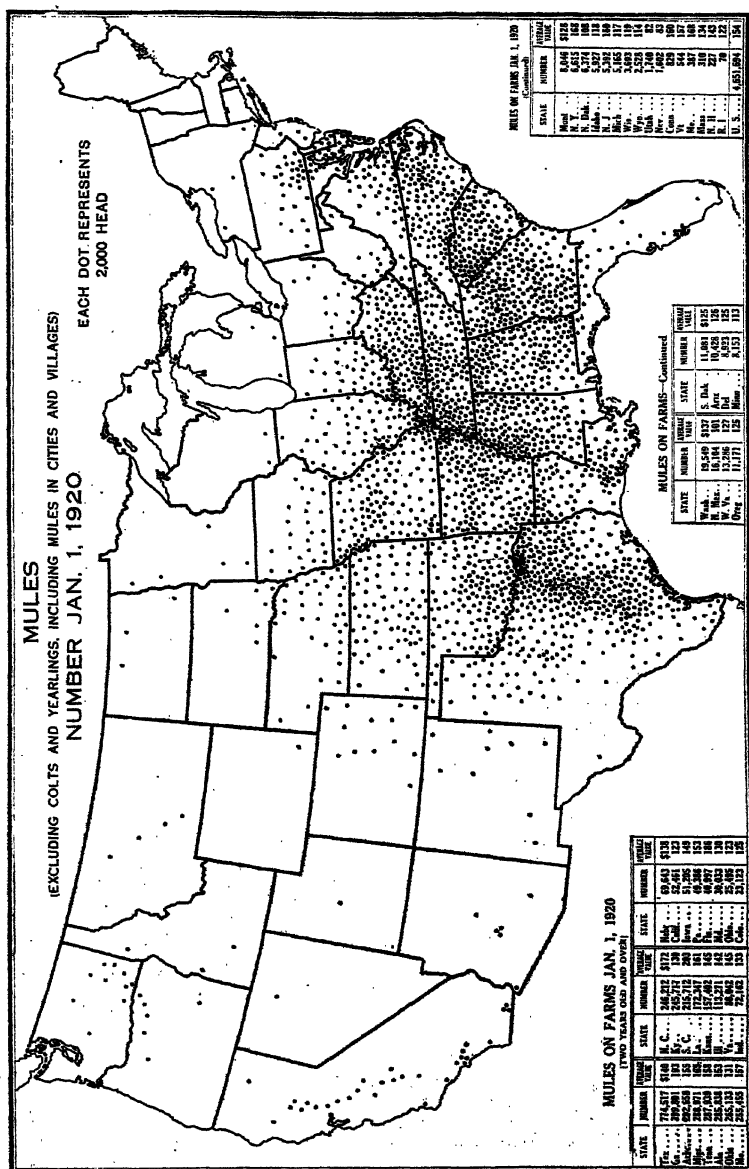


FIG. 77.—About five-sixths of the mature mules (2 years old and over) in the United States are in the Cotton Belt and the Corn and Winter Wheat Region. In the eastern Cotton Belt (east of Texas and Louisiana), where negro farmers are most numerous (see Figs. 116 and 117), there are twice as many mature mules as horses. The popularity of mules is also increasing in the North and West. Whereas the number of horses over 1 year of age on farms in the United States was only 6 per cent greater in 1920 than in 1910, the number of mules increased 33 per cent. This rate of increase was almost as great in the North as in the South. Mules, it will be noted, are used on farms in every State of the Union.

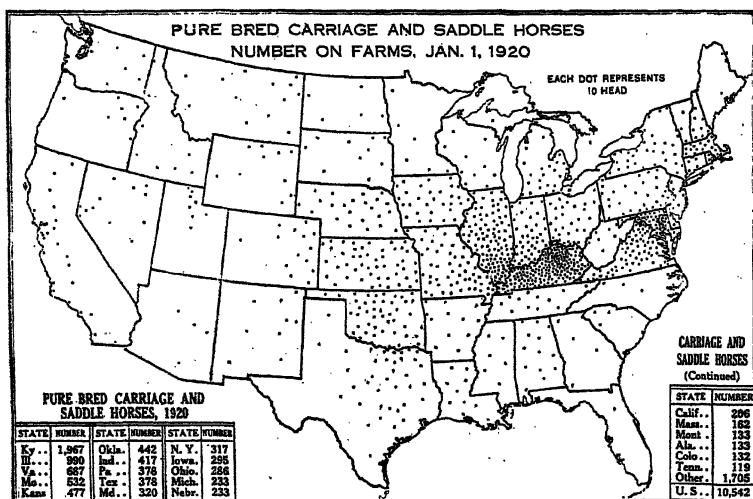


FIG. 78.—The number of pure-bred horses of saddle and carriage breeds in the United States was only about one-ninth the number of those of draft breeds in 1920. The relatively large number of these saddle and carriage horses in Kentucky and adjacent portions of Illinois and Indiana, also in Virginia and Maryland, is noteworthy. These are areas famous in song and story for their fine horses, and despite the decline of horse racing as a sport, and the decreased use of horses for riding and driving, breeders and horse fanciers in these States retain a large number of pure-bred saddle and carriage horses. Probably only a small number, however, are used for breeding.

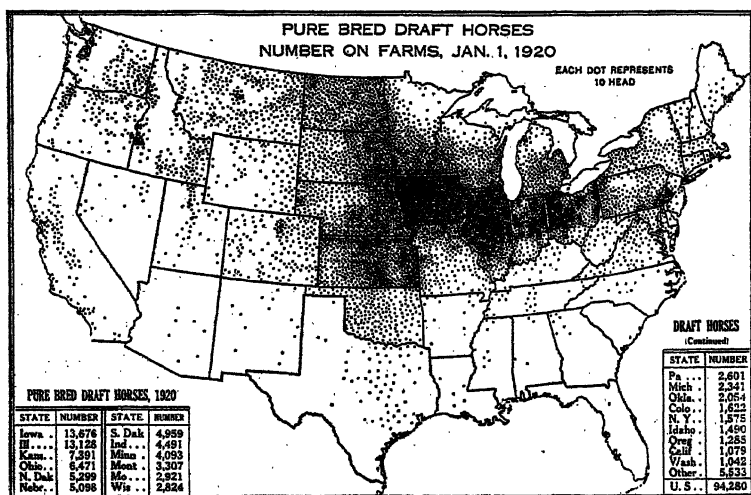


FIG. 79.—About half the pure-bred draft horses in the United States are in the Corn Belt, and most of the other half are in the Hay and Pasture, Spring Wheat, and Great Plains Regions. Very few are found in the South or Southwest. In California, Oregon, Washington, and Idaho, however, pure-bred draft horses relative to the total number of horses are almost as common as in the Corn Belt. Three-fourths of the pure-bred draft horses in the United States are Percherons, 10 per cent are Belgians, 5 per cent are Shires, and 4 per cent are Clydesdales, other breeds constituting the remainder.

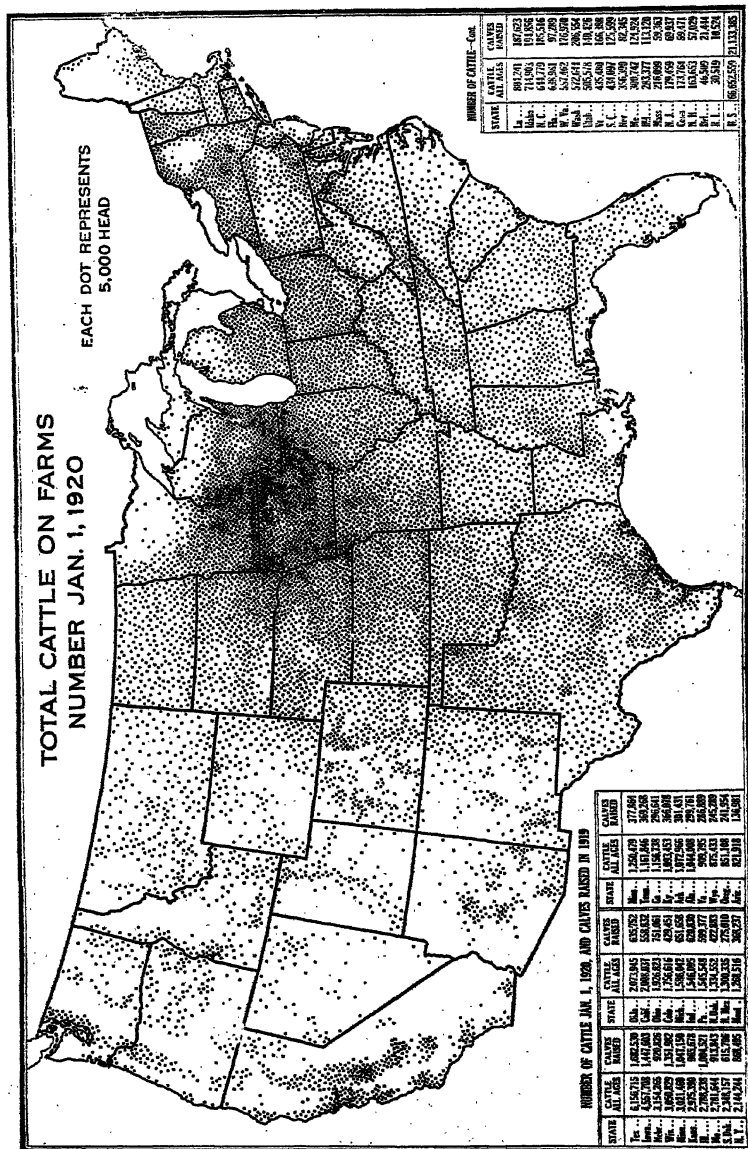


FIG. 80.—Cattle are more evenly distributed over the United States than any other kind of live stock. The densest area is in Iowa, northern Missouri, eastern Nebraska, southern Minnesota and Wisconsin, and northwestern Illinois. On January 1, 1920, there were about 14 million cattle in the Corn Belt, or 60 to the square mile; 12 million in the Hay and Pasture Region, which is 36 to the square mile; 10 million in the Corn and Winter Wheat Region, which is 32 to the square mile; 9 million in the Cotton Belt, or 21 to the square mile; and 9½ million in the Great Plains Region, or about 20 to the square mile. The seven other regions had about 14 million cattle, an average of 11 to the square mile. In Iowa there were 82 cattle to the square mile. (See Figs. 11, 27, and 38.)



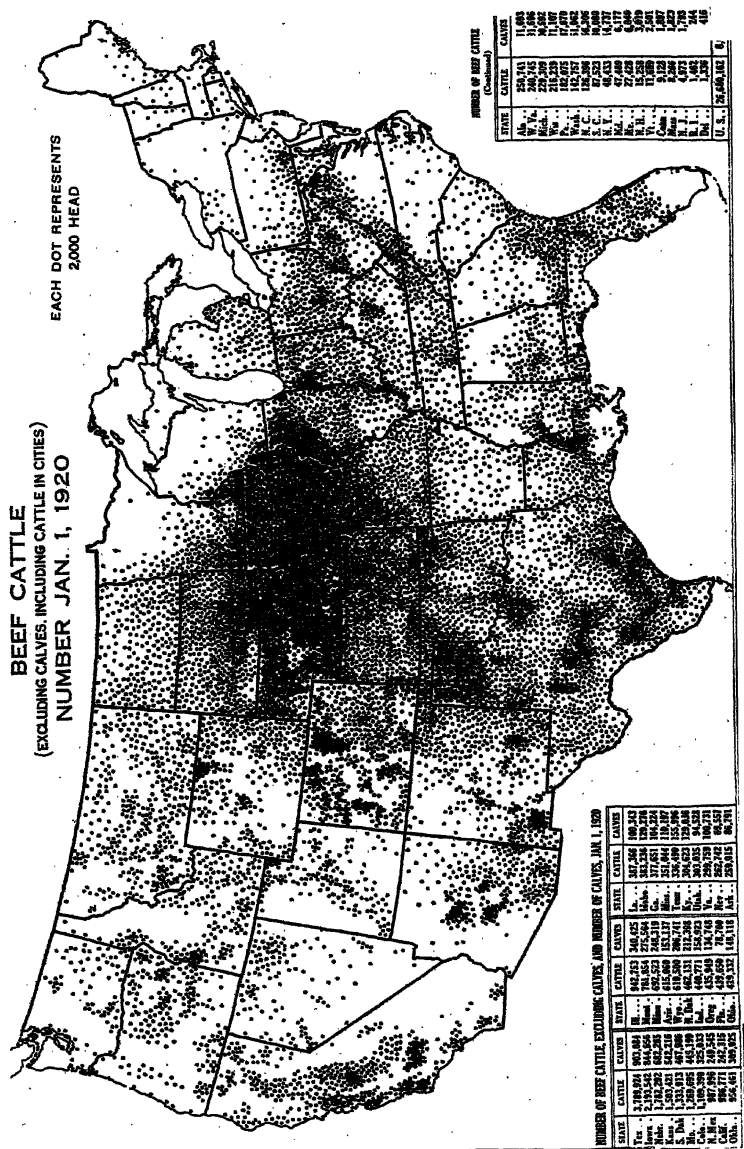


FIG. 81.—Beef cattle constitute slightly over half the total number of cattle in the United States, but slightly less than half the value. Over 8 million beef cattle (including calves) are in the Corn Belt, and as many more in the Great Plains Region, these two regions having nearly half the beef cattle in the country. A large number of beef cattle will also be noted in the Subtropical Coast and southern portion of the Cotton Belt, in the Appalachian valleys, in eastern Kansas, in the mountain parks and valleys of Colorado, Utah, and Idaho, on the plateaus of southwestern New Mexico and southeastern Arizona, and in California. Over 40 per cent of the beef cattle are in the western half of the United States. (See Figs. 12, 27, and 42.) The corner table gives figures of beef cattle and of calves on farms only; there were 890,963 in cities and villages.

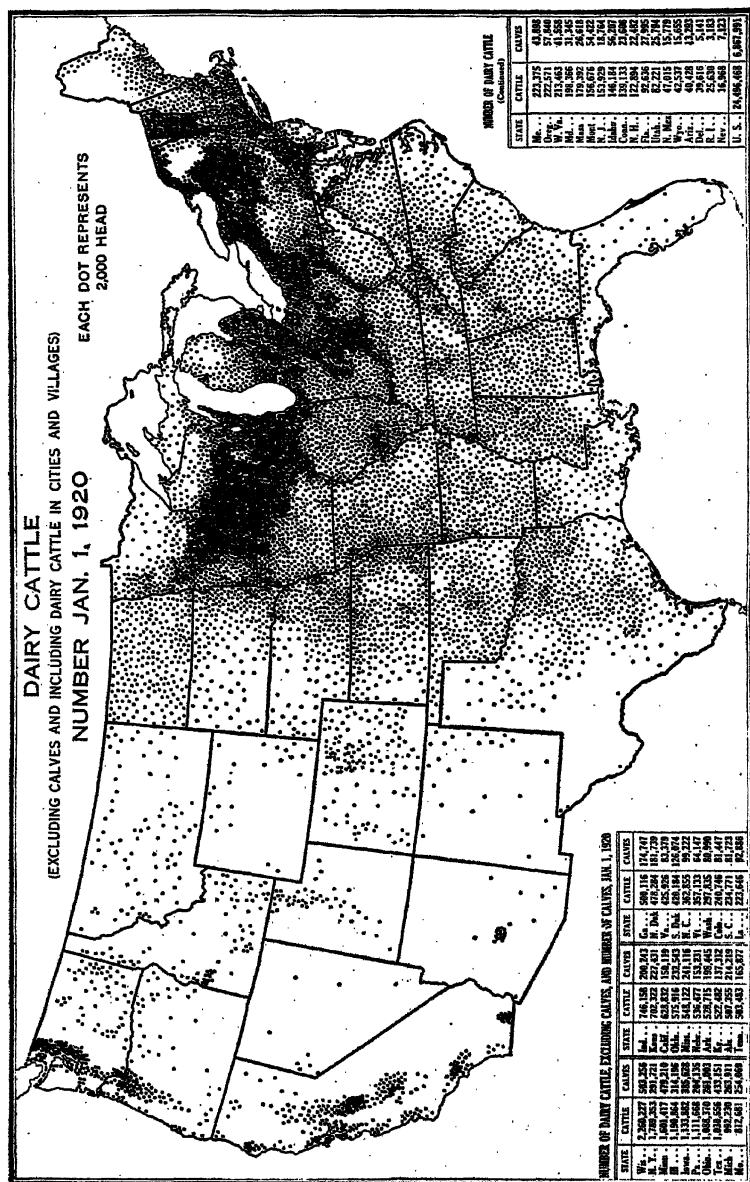


FIG. 82.—Nearly half the dairy cattle in the United States are in the Hay and Pasture Region and the adjacent northern and eastern margin of the Corn Belt. Other dense areas will be noted in southeastern Pennsylvania, which is really Corn Belt country, and in the valleys of the North and South Pacific regions. In the Cotton Belt, especially the northern portion, dairy cattle are more numerous than beef cattle, but in the Great Plains, Rocky Mountain, and Arid Intermountain Regions they are much less numerous. Nine-tenths of the dairy cattle are in the East. The dairy cattle in cities and villages ("not on farms and ranges") number 1,220,564, which is less than 4 per cent of all dairy cattle and calves in the United States. (See Figs. 25, 40, and 85.)

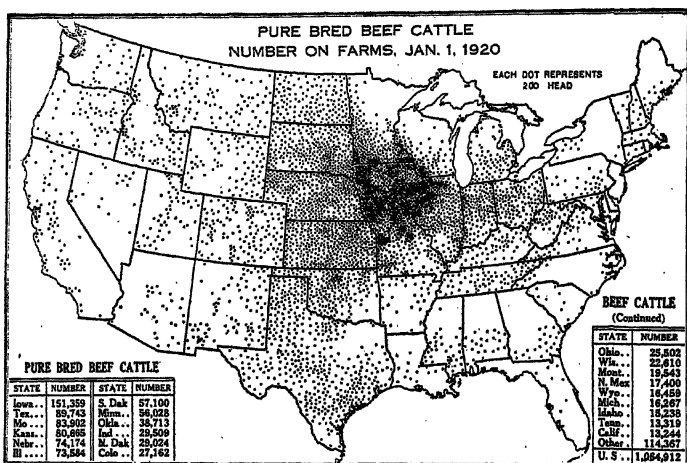


FIG. 83.—The number of registered pure-bred beef cattle is more concentrated geographically than that of all beef cattle. Iowa alone has one-seventh of the entire number in the United States. Five per cent of the beef cattle in Iowa are registered. The prairie and plains portion of the United States (see "tall grass" and "short grass" of Fig. 7) has nearly four-fifths of the pure-bred beef cattle in the country. About two-fifths of the registered beef cattle are Shorthorns—nearly one-half if Polled Durham be included—and nearly two-fifths more are Herefords. Aberdeen-Angus constitute about one-tenth of the total number. Iowa leads the States by a wide margin in number of Shorthorns and Aberdeen-Angus, while Texas leads in number of Herefords.

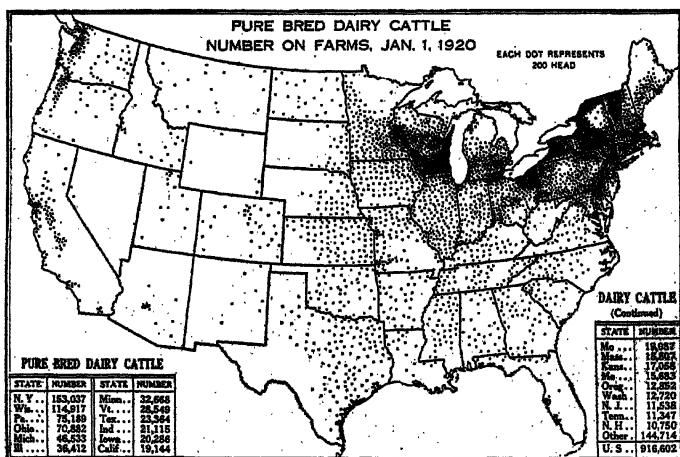


FIG. 84.—Sixty per cent of the registered pure-bred dairy cattle are concentrated in the Hay and Pasture Region. About 5 per cent of the dairy cattle in this region are registered. New York has one-sixth of the registered dairy cattle in the United States, and Wisconsin has one-eighth. Much smaller numbers may be noted in the valleys of California and of western Oregon and Washington. About 58 per cent of the registered dairy cattle in the United States are Holstein-Friesians, 25 per cent are Jerseys, 9 per cent are Guernseys, 3 per cent are Ayrshires, and 1 per cent Brown Swiss, the remainder being unspecified.

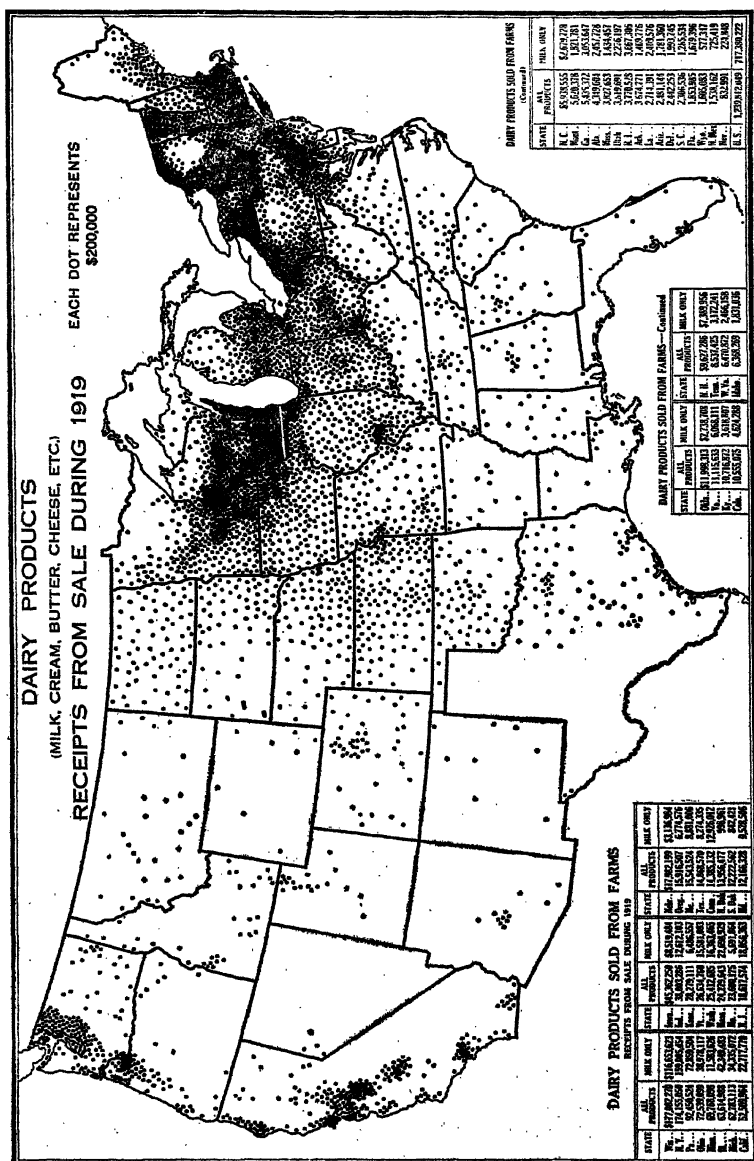


FIG. 85.—This map shows the commercial dairying districts. The concentration in the Hay and Pasture Region is much greater than that of dairy cattle (Fig. 82). Commercial dairy centers may also be noted near the large cities outside this region, notably Philadelphia, Baltimore, Washington, Cincinnati, Indianapolis, St. Louis, Kansas City, Los Angeles, and San Francisco. These, as also the centers adjoining New York City, Boston, Buffalo, Cleveland, and Detroit, represent market milk mostly; while the larger districts in central and northern New York, in Wisconsin, and in Minnesota represent milk and butter fat sold to creameries and cheese factories largely (see Figs. 86, 87, and 88). The value of dairy products consumed on the farm is estimated by the census at about \$240,000,000.

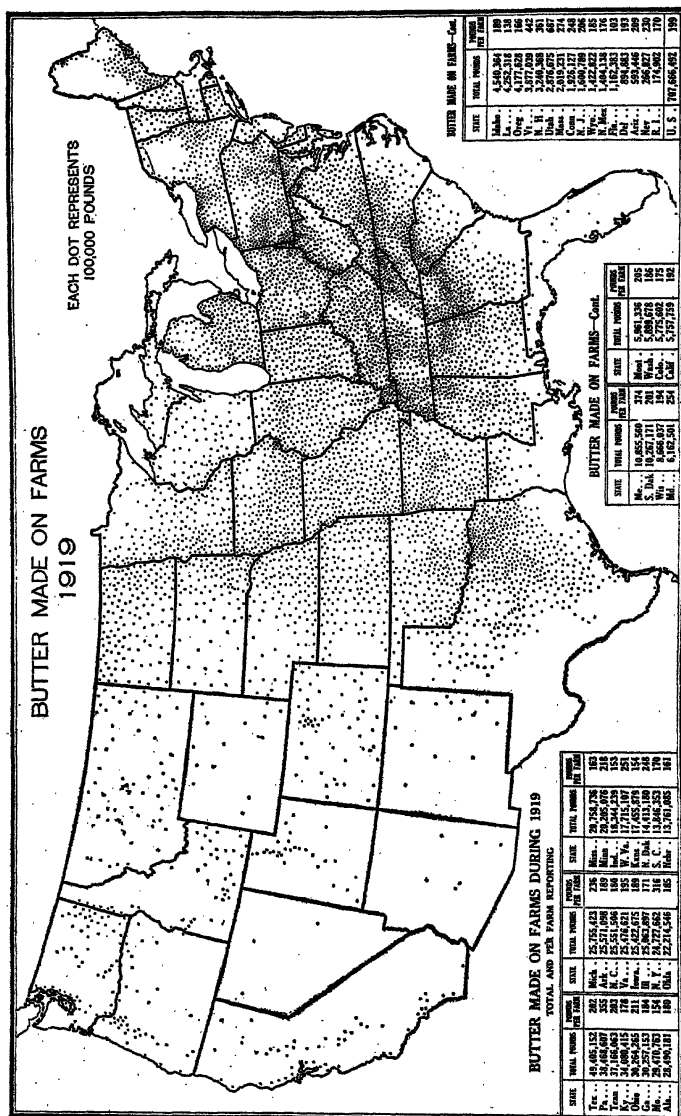


FIG. 86.—Butter made on farms in 1919 constituted 43 per cent of the total production of 1,648,171,874 pounds reported by the census. The areas of densest production of farm butter, it will be noted, are the Piedmont Plateau, extending from eastern Pennsylvania to Alabama; the Tennessee River Valley of northern Alabama and eastern Tennessee; the upper Ohio River basin; the western portion of Kentucky and Tennessee; and the northeastern portion of Texas. It is notable how little butter is made on farms in Wisconsin and Minnesota, where the factory system is well developed. Over half of the farms in the United States made butter in 1919, but less than one-third of the butter made was sold. Most of this farm butter sold was consumed in the locality where it was produced.

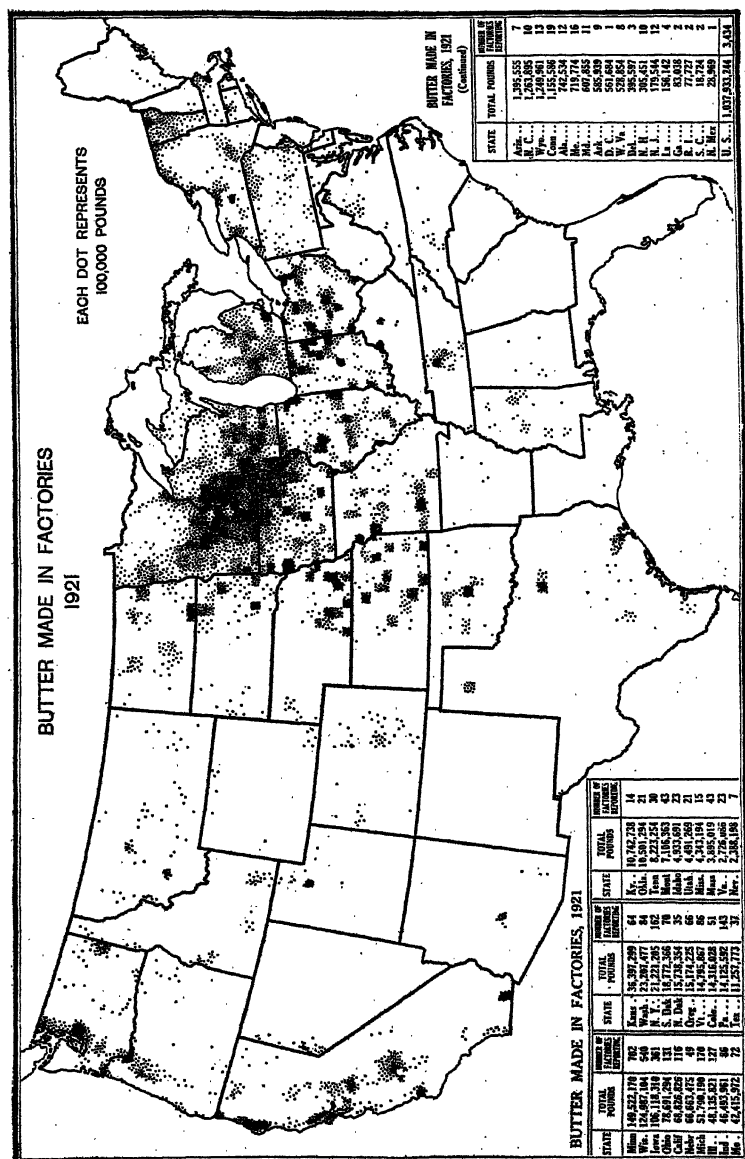


FIG. 87.—Most of the factory butter is made in the Hay and Pasture Region, especially the western portion, in the Corn Belt, and in the Pacific Coast Regions. The spotted character of the map, especially in the Corn Belt, indicates the concentration of butter making in a relatively few cities to which the cream or butter fat is shipped from the farms. Whereas only half as much butter was sold by the farmers of the United States in 1919 as in 1909, the amount of butter fat sold increased 74 per cent and of cream sold 50 per cent. The figures used in preparing this map were compiled from reports received by the Dairy and Poultry Division of the Bureau of Agricultural Economics. Returns received since the map was prepared increase the total for the United States to 1,055,000,000 pounds.

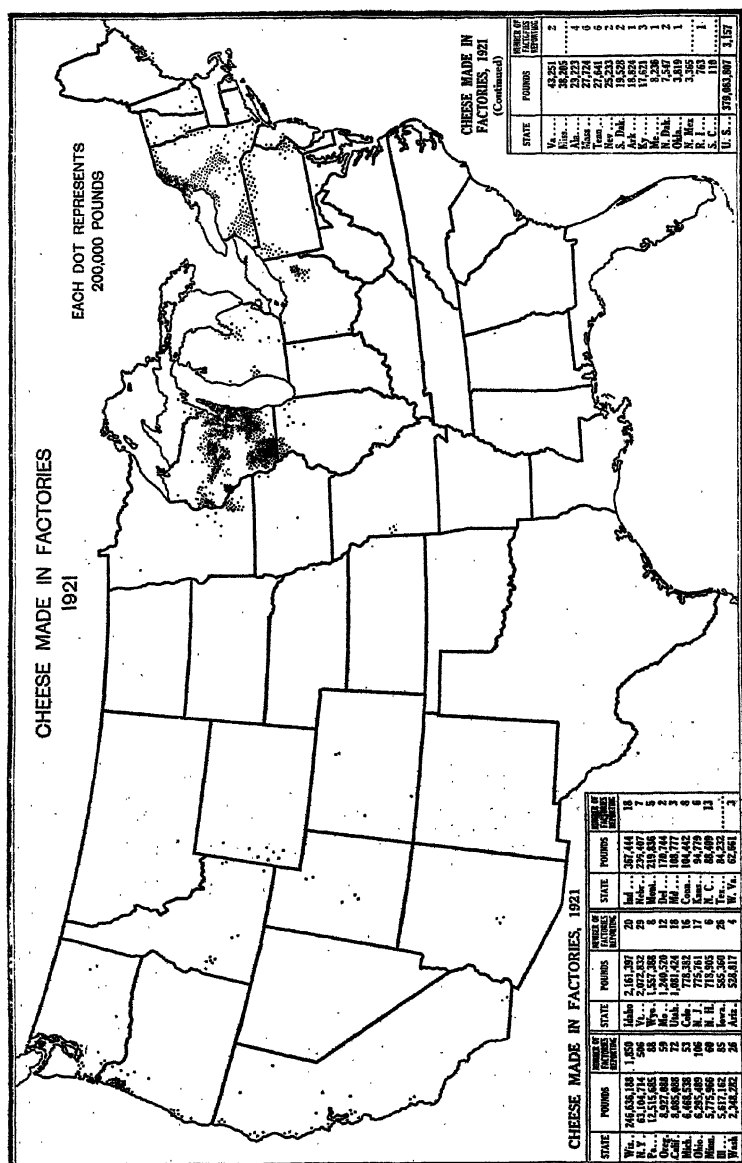


FIG. 88.—Practically all the cheese is now made in factories, only 6,000,000 pounds in 1919, or less than 2 per cent of the total production of the United States, being made on farms. About two-thirds of the cheese is made in Wisconsin and half of the remainder in New York. Cheese production has developed in those parts of Wisconsin and New York having less than 150 days in the growing season, except along the lake shores, and in the central, sandy portion of Wisconsin, which has poor pastures. The short, cool season favors summer pasture and cheese production, just as allage, winter dairying, butter making, skim milk, hogs, and corn complete the economic cycle in the warmer belt to the south. The figures were compiled from reports received by the Dairy and Poultry Division, Bureau of Agricultural Economics.

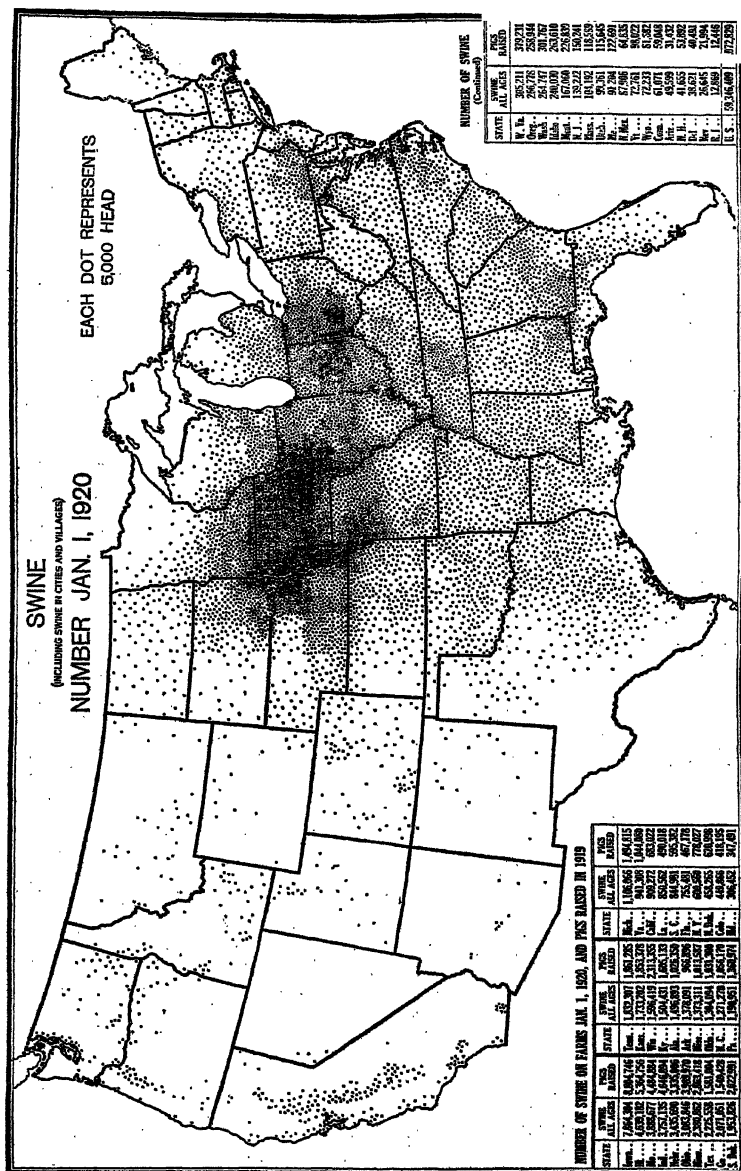


FIG. 89.—Over two-fifths of the hogs and pigs in the United States are in the Corn Belt, nearly one-fifth are in the Cotton Belt, and nearly another fifth in the Corn and Winter Wheat Region. In 1899 there were, on the average, 106 swine per square mile in the Corn Belt, 27 in the Cotton Belt, 82 in the Corn and Winter Wheat Region, 17 in the Hay and Pasture Region and about 4 per square mile in the remainder of the United States. Just as the cool Hay and Pasture Region finds the best outlet for its crops in feeding dairy cows, so the warm, rich Corn Belt finds the growing, feed and feeding of beef cattle and hogs its most profitable system of farming (see Fig. 27 and 81). Swine in cities and villages numbered 2,638,389, which is about 4 per cent of the total number in the United States.



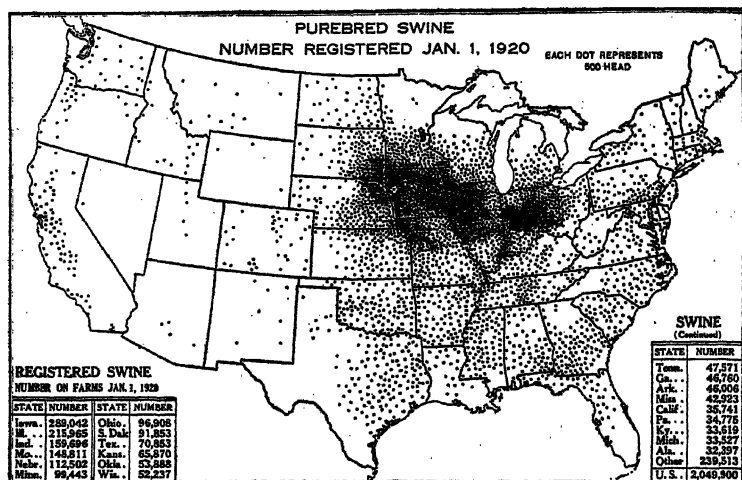


FIG. 90.—Nearly 60 per cent of the registered pure-bred hogs and pigs are in the Corn Belt. About one-seventh, as with pure-bred beef cattle, are in Iowa. Nearly 5 per cent of the swine in the Corn Belt are registered, and 3 per cent in the remainder of the United States. Duroc-Jersey hogs constitute 40 per cent of the registered swine in the United States, Poland-China 35 per cent, Chester-White 9 per cent, Hampshire 5 per cent, Berkshire 4 per cent, other breeds and unspecified 7 per cent. Iowa leads all States in number of pure-bred Duroc-Jersey, Poland-China, Chester-White, Hampshire and Tamworth; Indiana in number of spotted Poland-China; Pennsylvania in Berkshires; Kansas in Essex; and Minnesota in Yorkshires.

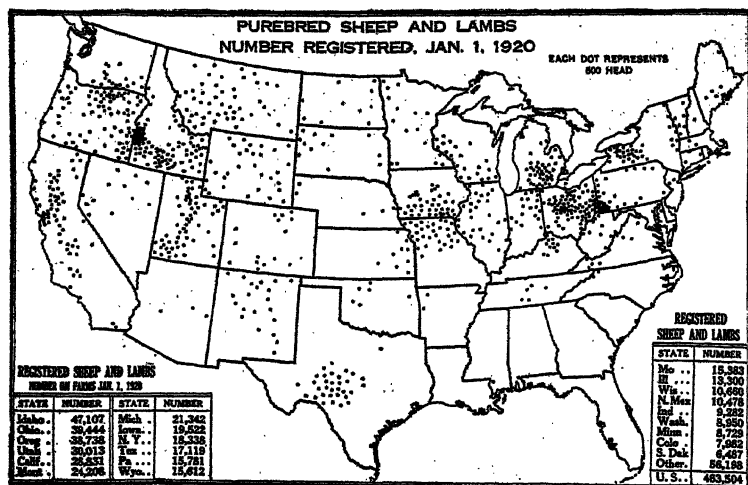


FIG. 91.—Registered pure-bred sheep and lambs are more evenly diffused geographically than pure-bred cattle or swine. A few breeders remain in the old centers of production in Vermont and New York; many more pure-bred sheep may be noted in the more recent production areas of Ohio, southwestern Pennsylvania and southern Michigan; but the greatest number is now found in the West, Idaho leading the States with nearly 50,000 registered animals. Shropshires constitute 27 per cent of all registered sheep in the United States, Rambouillet 23 per cent, Merino 14 per cent, Hampshire 11 per cent, other breeds and unspecified 25 per cent. The Cotton Belt is the only region in which there are practically no pure-bred sheep.

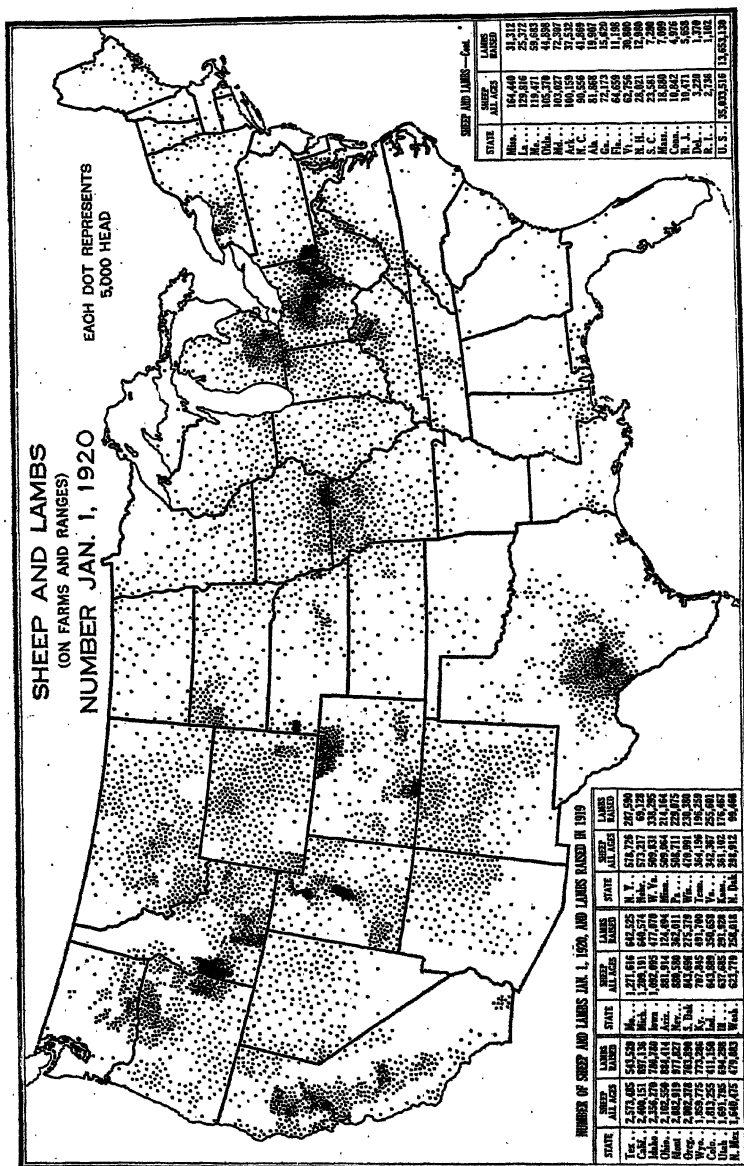


FIG. 92.—Over 60 per cent of the sheep and lambs are in the western half of the United States, largely because sheep can graze on more arid lands than any other kind of domesticated animal, and also are less subject to disease in arid than in humid climates. The dense spots shown in the West are owing in part to the date of enumeration, January 1, when many sheep are being fed in the irrigated districts, and in part of the enumeration of sheep in that county in which the owner resides, even though the bands of sheep be roaming over distant deserts. The following summer the same sheep may graze on the alpine meadows of the national forests an hundred miles or more away. The dense centers in the East, however, represent sheep on farms within the counties indicated.

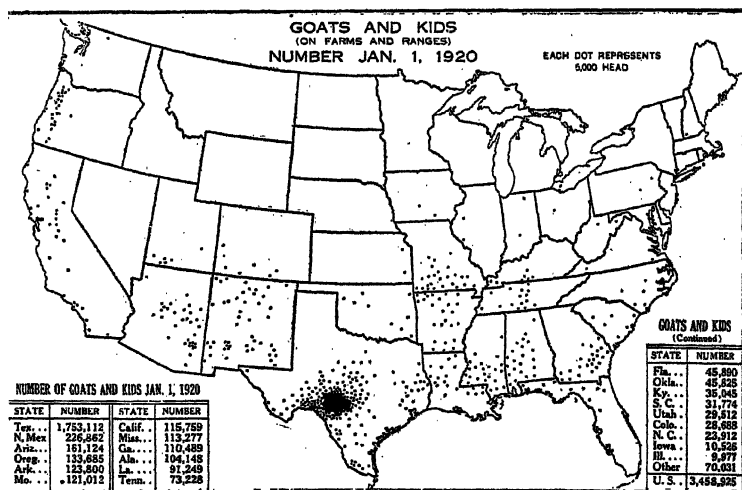


FIG. 93.—Over half of the goats in the United States are in Texas—nearly all on the Edwards Plateau. Cattle, sheep, and goats (see Figs. 81 and 92) are grazed on the same land in this district, the cattle pasturing on the grass, the goats browsing the oak scrub and other brush, retarding its advance upon the grass land, while the sheep eat the weeds as well as the grass and brush. In the South and in western Oregon the goats are used in large numbers in clearing up cut-over land. In Texas and Oregon the goats are mostly Angoras, in Arizona and New Mexico Angoras predominate, but other breeds are common, while in the South practically none of the goats are raised for their fleece.

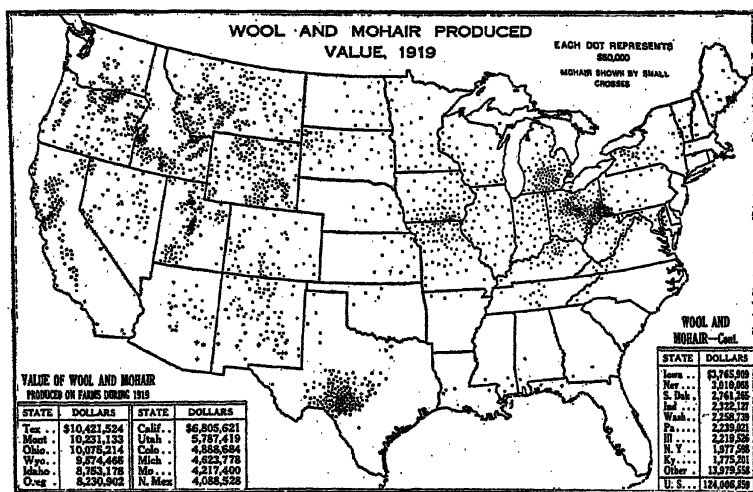


FIG. 94.—The farm value of the wool produced in the United States in 1919 was about 120 million dollars, and of the mohair about three and a half million. Texas led the States in value of wool and mohair produced, but as the value of the mohair amounted to \$2,873,275, the value of the wool produced in Texas was less than in Montana, Ohio, Wyoming, Idaho, or Oregon. The average value of the wool produced in 1919 per mature sheep January 1, 1920, was \$6.43 in Ohio, \$6.50 in Montana, \$5.53 in Oregon, and about \$4 in Texas; while the value of mohair in Texas per mature goat raised for the fleece was \$2.40. The price of wool in 1919 was about three times the pre-war price.

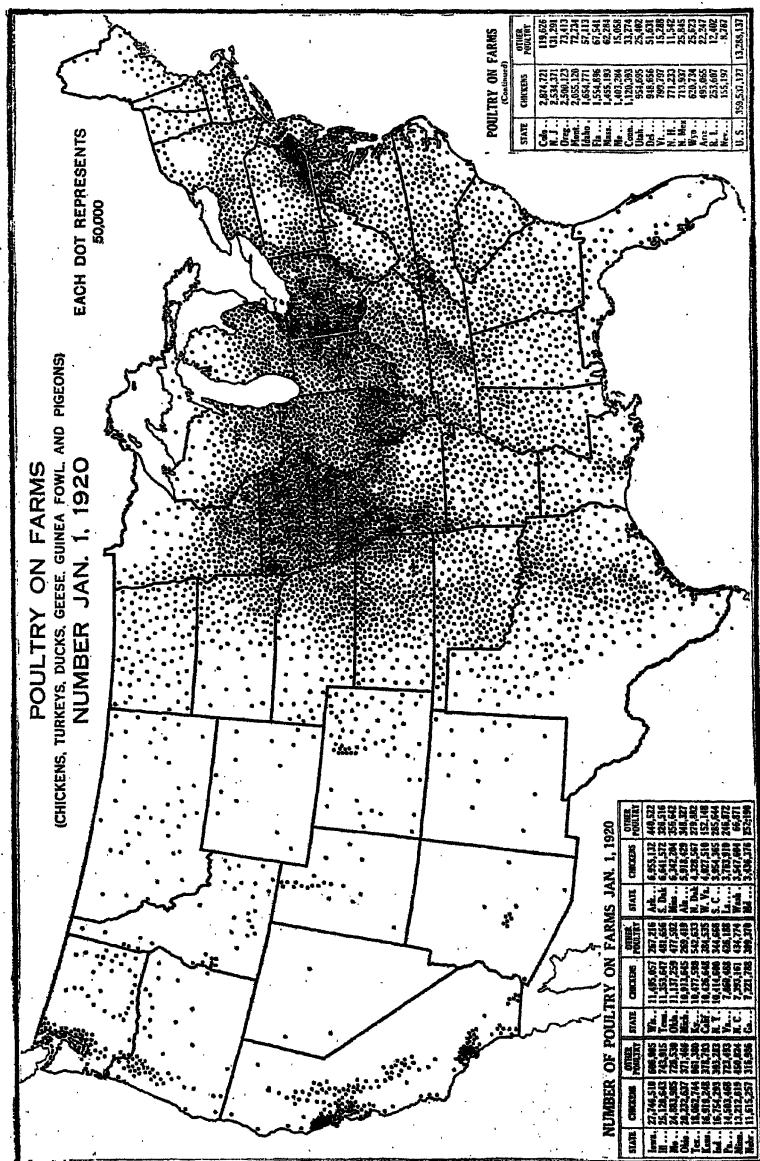
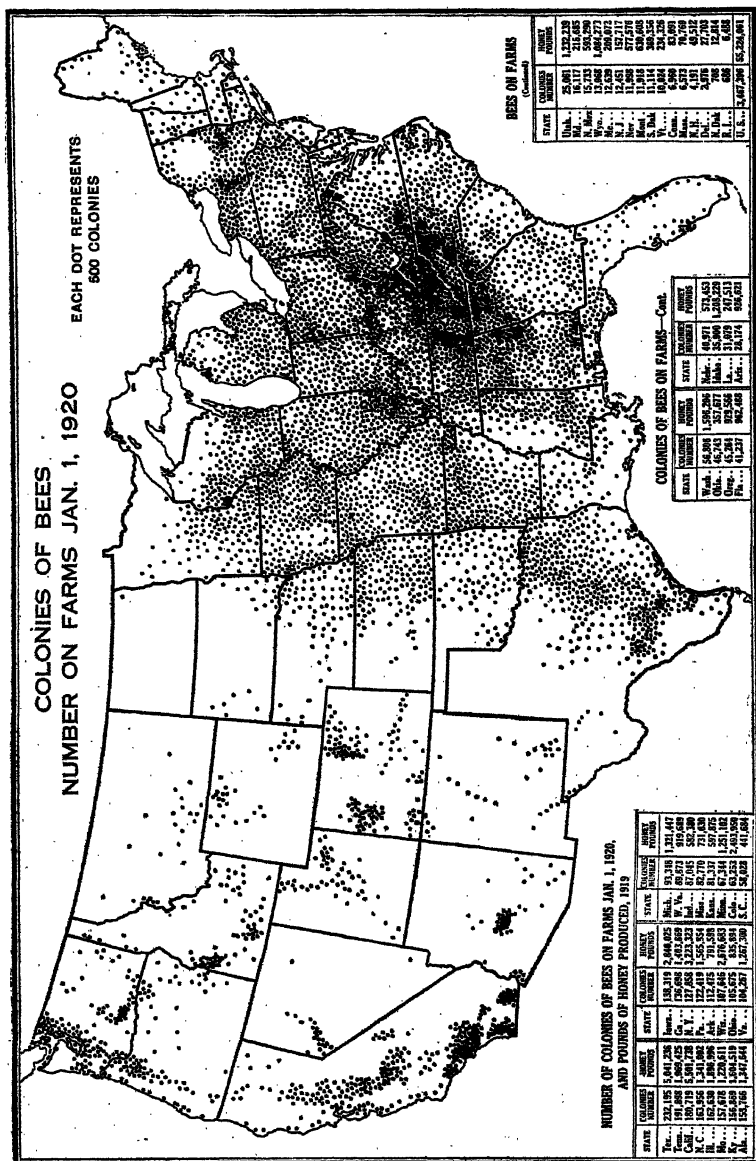


FIG. 95.—Half of the poultry in the United States are in the Corn Belt and around its margin, where feed is cheap. But the two most notable districts of production are the counties in southeastern Pennsylvania, near Philadelphia, and Sonoma County, Calif., especially the district around Petaluma. Six counties in southeastern Pennsylvania had nearly 5 million poultry on January 1, 1920, or 4,000 to the square mile; while in Sonoma County there were over 3 million poultry, with sales of eggs and chickens amounting to over 12 million dollars in 1919. Los Angeles County, Calif., had 1,850,000 poultry. The California cities are supplied largely from these two counties; but the eastern cities draw their supplies from a much wider territory.



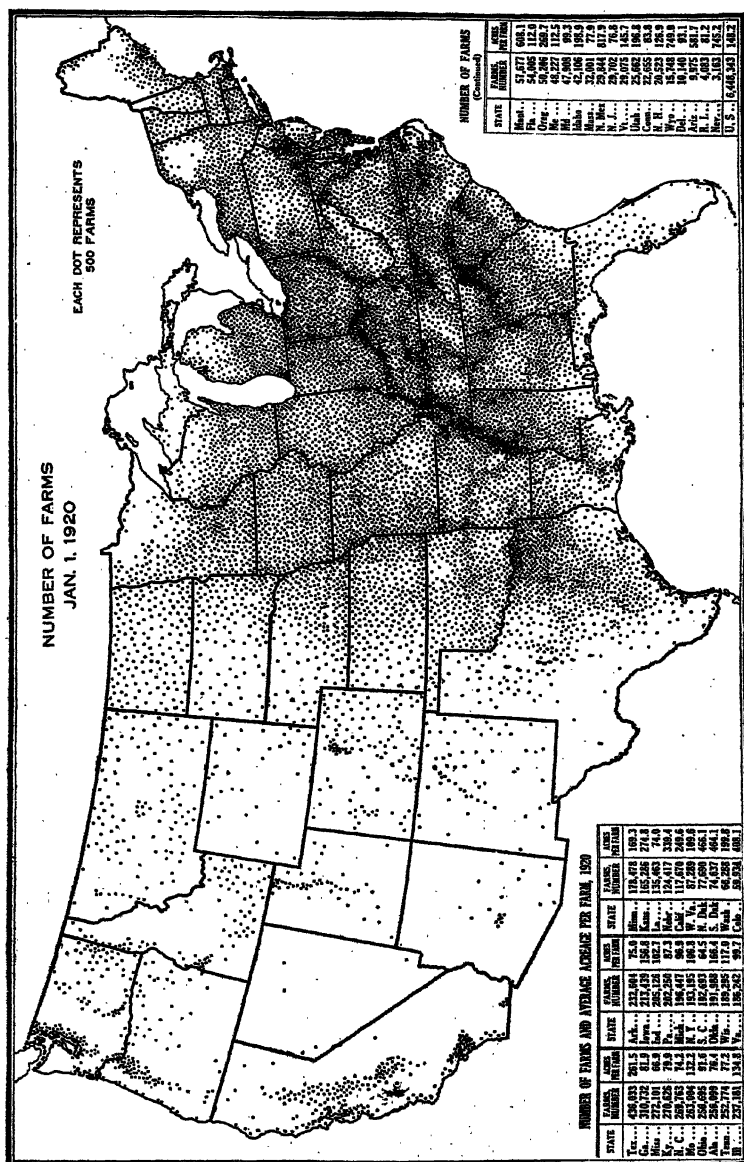
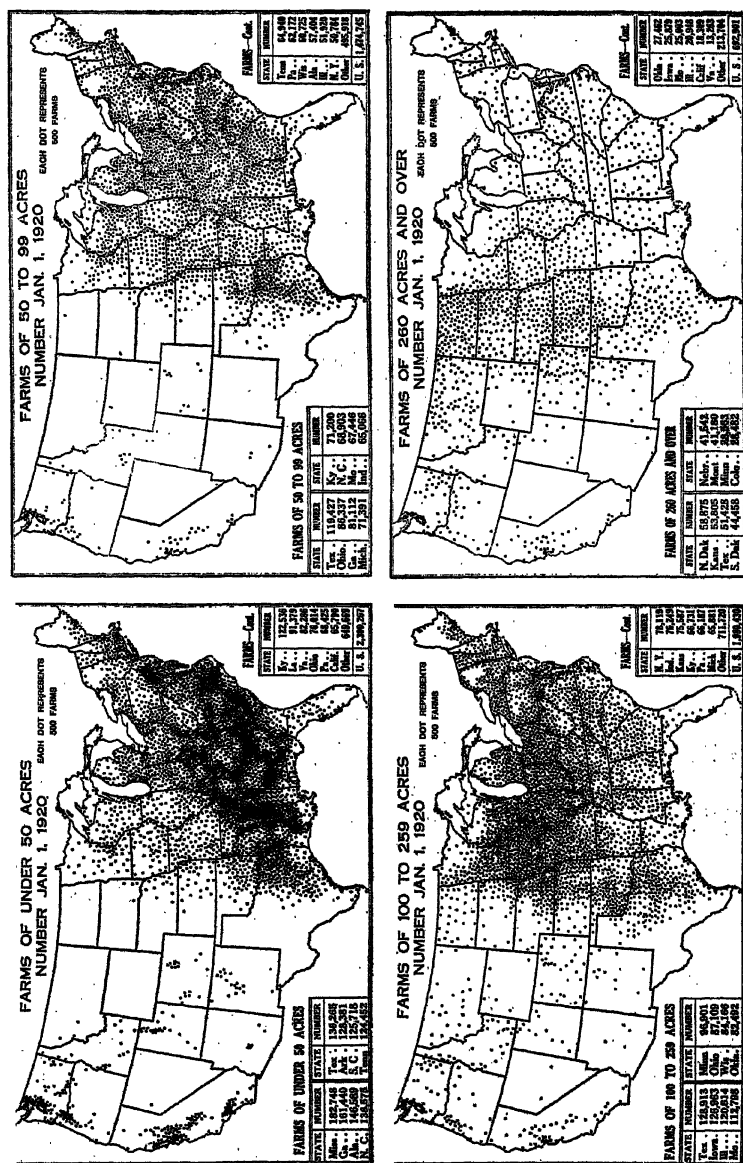


FIG. 97.—This map, showing the distribution of farms, might also serve as a map of farm population. The densest areas are southeastern Pennsylvania, the upper Piedmont of South Carolina and Georgia, eastern, central, and western Tennessee, the Ohio Valley, and the Yazoo Delta in Mississippi. Over half the farms in the United States are in the Cotton Belt and the Corn and Winter Wheat Region. Many of the tenant farms on the plantations in the Cotton Belt, however, are little more than laborers' allotments. The Corn Belt, although it includes over one-third the value of farm property in the United States, has only one-seventh of the farms. Nine-tenths of the farms are in the eastern half of the United States. The relative density of farm population in the South is even greater than that of farms. (See Figs. 104 and 118.)



Figs. 98 to 101.—The typical negro tenant farms are from 30 to 50 acres in size, of which about half is in cotton. Many white farmers also have small farms; both in the Cotton Belt and in the Corn and Winter Wheat Region. Farms of 50 to 100 acres are characteristic of the white cotton farmers in the upper Piedmont of the Carolinas and Georgia and the Black Prairie of Texas; also of the fair to good soils of Tennessee, Kentucky, Ohio, and Michigan. On the richer lands of the Corn Belt farms of 100 to 260 acres prevail. Large farms in area—over 260 acres—are found in the Great Plains and Spring Wheat regions. A two-section "dry farm" in the Great Plains Region, however, is no larger in productivity than a quarter-section farm in the Corn Belt (see Fig. 103).

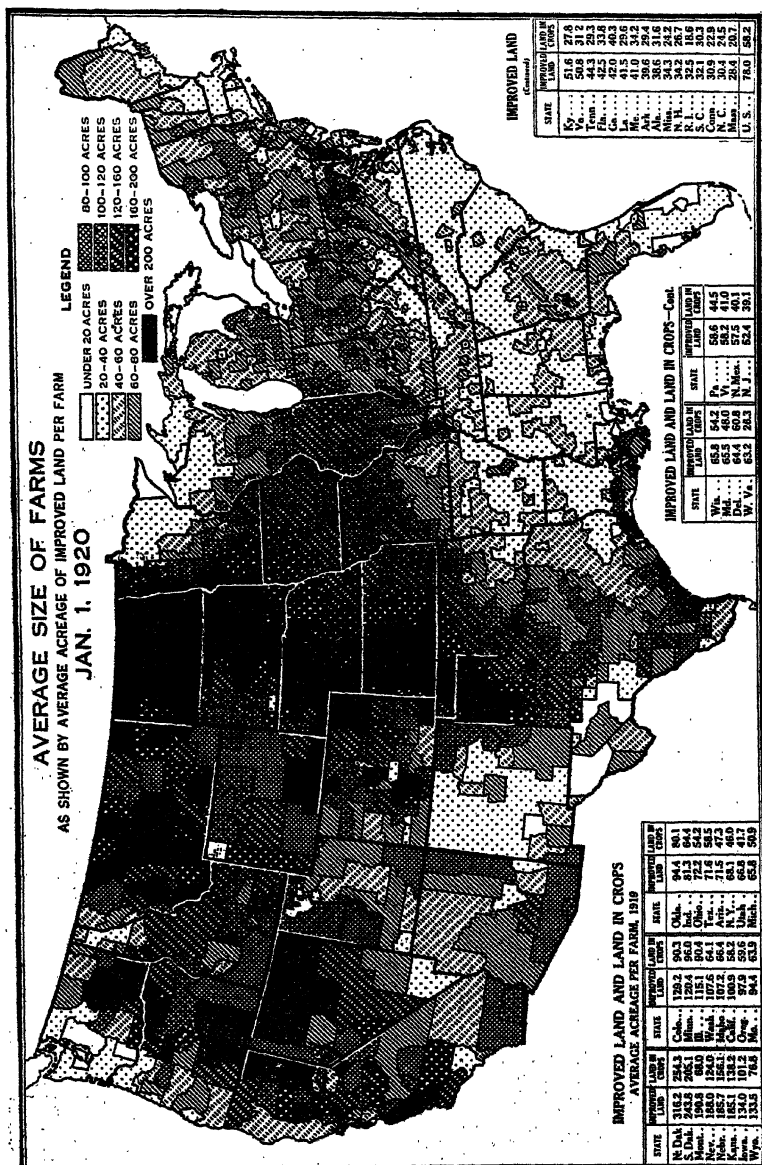


Fig. 102.—Improved land is a better criterion of the real size of a farm than its total area. The Cotton Belt stands out clearly, with the farms in most of the area averaging less than 40 acres. The same small acreage per farm is found in eastern New England, where trucking and dairying dominate, and in the upper Lakes area, where farms are only partially reclaimed from the forest. At the other extreme, much of the Great Plains and most of the Spring Wheat Area average over 200 acres per farm. The sharp gradation zone extending from northwestern Minnesota to Indiana, thence to central Texas, marks the eastern margin of the prairies (see Fig. 7). Prairie farms were more easily and quickly made than forest farms, and have remained larger. (See Fig. 111.)



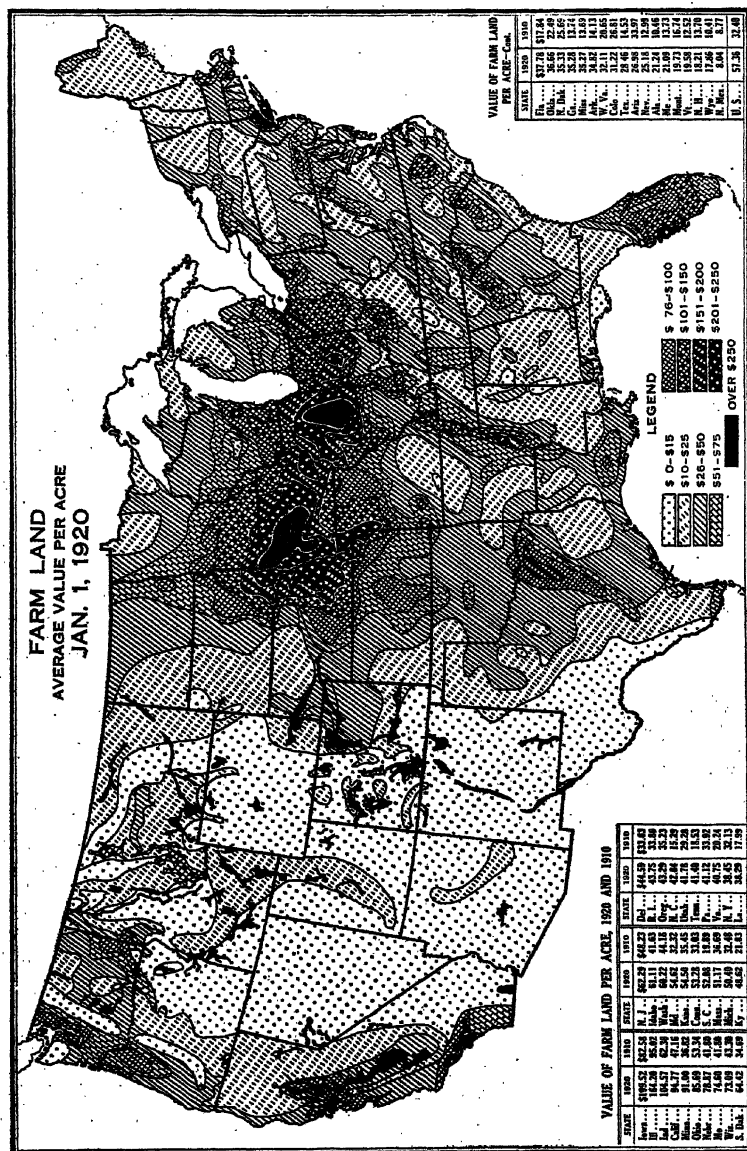


FIG. 103.—The Corn Belt is conspicuous on this map, average land values in central Illinois and northwestern Iowa having risen to over \$250 an acre in 1919. There has been a decline since. But the irrigated areas are also shown on the map as having land values of over \$250, but this is not true of all the districts. Even the larger irrigated areas were too small to show other than in black, and many smaller districts could not be shown at all. The regions of low land values are the arid and semiarid lands of the West, the sandy, thin, or stony soils of the upper Lakes area and the North Atlantic States, and the light or leached lands in parts of the South, where also much of the farm may be in forest. The first box in the legend should read \$0-\$10, the second box \$11-\$25.

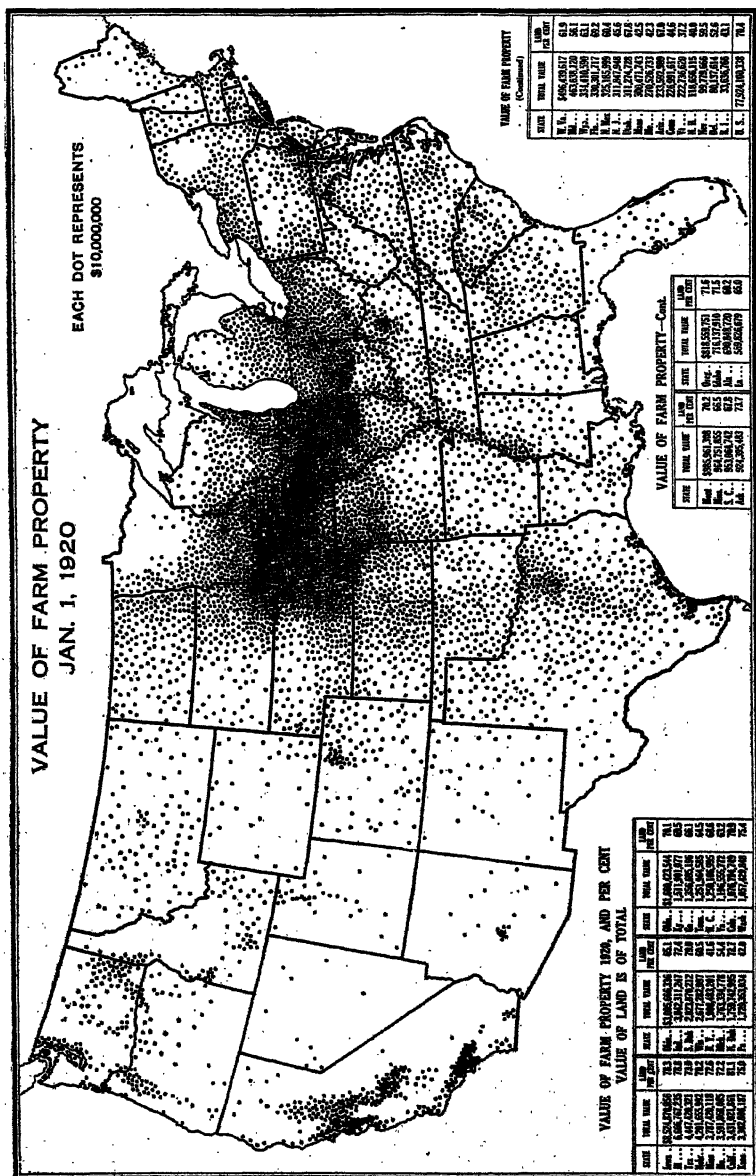


FIG. 104.—Over one-third of the value of farm property in the United States is in the Corn Belt, and nearly two-fifths of the value of farm land. The average value of farm land per acre January 1, 1920, was \$148 in the Corn Belt, as compared with \$40 in the Cotton Belt, \$48 in the Hay and Pasture Region, and \$21 in the Great Plains Region. Only in the South Pacific Coast Region does the value of farm property per square mile and of farm land per acre (\$114) approach the values in the Corn Belt. Note the districts of greater values adjoining New York City, Philadelphia, Detroit, and the Twin Cities, also the Blue Grass district in Kentucky.

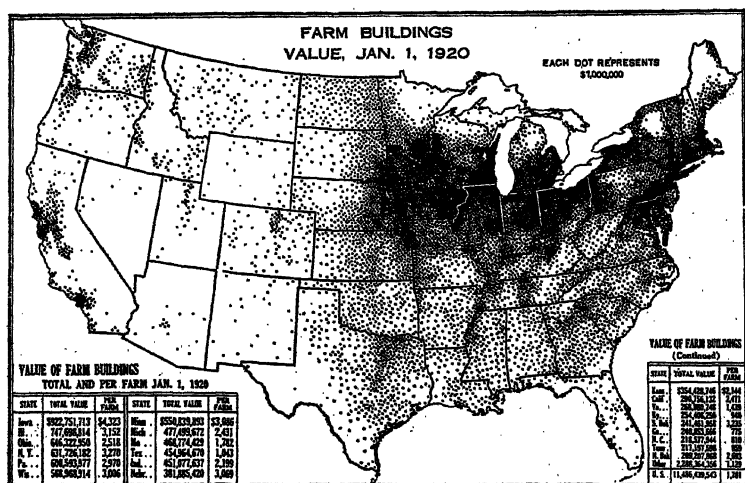


FIG. 105.—The value of farm buildings is greatest in southeastern Pennsylvania, where it exceeds the value of the land, and averages \$4,000 to \$5,000 per farm. In the Corn Belt the average value of farm buildings is \$3,400 per farm, and it is almost as much in the Spring Wheat Area, and the southern portion of the Hay and Pasture Region. In the Cotton Belt, on the other hand, the average value is only \$738, owing in part to the large number of negro shanties. However, the value of the buildings on the landlord's farm in a plantation is almost as great as the values in the Corn Belt. These values of farm buildings include barns and outbuildings, and since the value of the house is, in general, about half that of all farm buildings, the average value of farm houses in the United States is only about \$800.

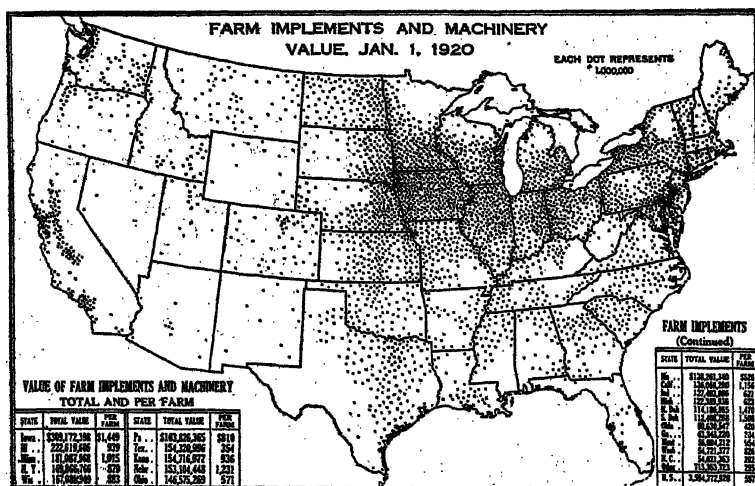


FIG. 106.—About one-half of the value of farm implements and machinery in the United States was reported in 1920 from the Corn Belt and the Hay and Pasture Region; but the greatest value per farm (\$1,370) was in the Spring Wheat Area. In the general farming districts of the North and West the average farm had about \$1,000 worth of machinery in 1920, but the much smaller amount per farm in the Cotton Belt (\$215), and in the Corn and Winter Wheat Region (\$400), reduced the Nation's average to \$557. The proportion which the value of machinery and implements constituted of the total value of farm property was extraordinarily uniform, ranging around 4 to 5 per cent in all the regions, except in the Hay and Pasture Region, where it constituted 7 per cent.

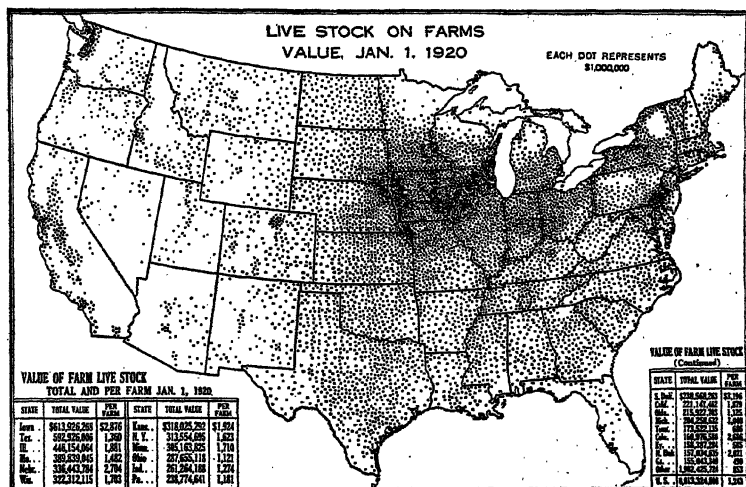


FIG. 107.—The Corn Belt contains one-fourth of the value of all live stock in the United States, or somewhat more than the entire western half of the country. There is also dense distribution in southern Wisconsin and Michigan, in New York, and in southeastern Pennsylvania, in which districts dairying is very important. The greatest average value per farm, over \$3,000, is in the Arid Intermountain and the Great Plains regions; the smallest, \$583, in the Cotton Belt. However, the proportion which value of live stock constitutes of the total farm investment is 12 per cent in the Cotton Belt, as compared with 8 per cent in the Corn Belt. The greatest proportion, 18 per cent, is found in the Rocky Mountain and Arid Intermountain regions.

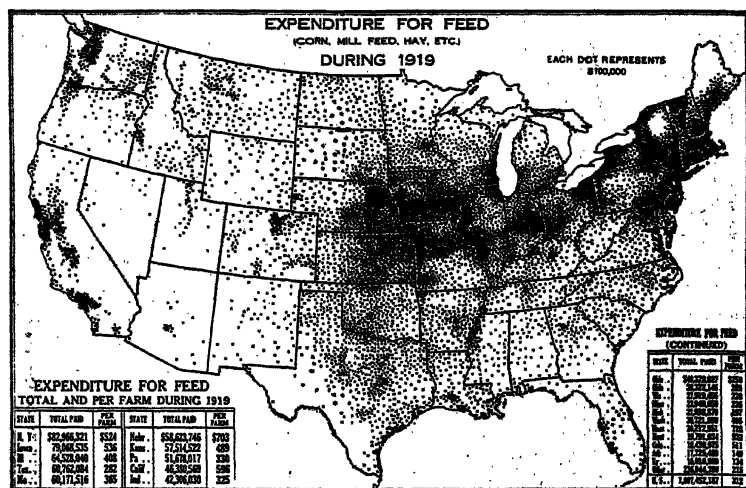


FIG. 108.—The expenditure for feed is greatest in the Hay and Pasture Region, where dairying dominates and the production of grain is deficient, and in the Corn Belt, where feed is freely bought and sold by the farmers, most of whom feed beef cattle and hogs. In north-central Illinois the expenditure for feed is much less because the corn is largely sold to the near-by Chicago market, and few cattle or hogs are raised. (See Figs. 28, 81, 89, and 107.) The heavier expenditure shown in the Puget Sound and Willamette Valleys is largely for feed for dairy cows, while in California the feed is bought principally for dairy cows and poultry.

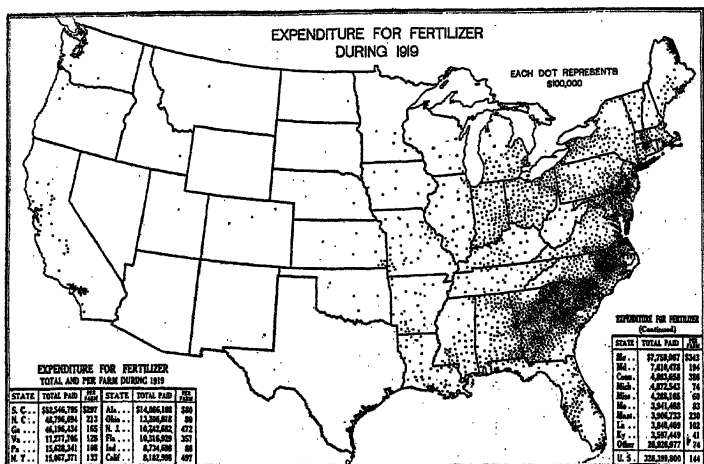


FIG. 100.—Fertilizer is used at present principally on the more intensively cultivated crops, particularly cotton, tobacco, fruit, and truck, including potatoes; and almost wholly as yet in the Eastern States, where the rainfall is heavier and the soils more leached. About half of the expenditure in 1919 was in the Coastal Plain and Piedmont portions of Georgia, the Carolinas, and Virginia. Minor areas are the trucking districts of New Jersey and Long Island, the tobacco-onion district of the Connecticut Valley, the Aroostook potato district in Maine, and the fruit-trucking district in southern California. Especially significant and prophetic is the considerable expenditure shown in Ohio and Indiana and even in Illinois and Iowa.

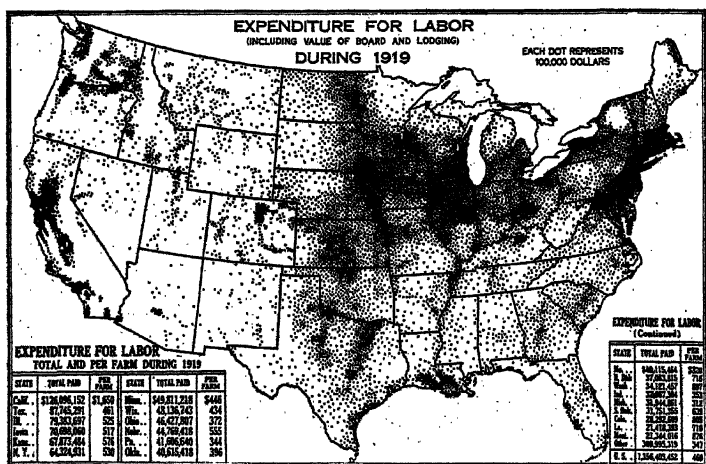


FIG. 110.—The expenditure for labor in 1919 was greatest in the trucking, fruit, and dairying areas, especially the coastal belt from Norfolk, Va., to Salem, Mass., the Ontario lowland of New York, the Elgin dairy district of northern Illinois and southern Wisconsin, and the irrigated valleys of the West. Heavy expenditure is also shown in most of the Corn Belt, and somewhat less in the Winter and Spring Wheat Areas. Although cotton is a crop requiring much more labor than any other major crop, the cash expenditure is small in the Cotton Belt because most of the labor is furnished by croppers and tenants. In the Black Prairie of Texas, however, many Mexicans are hired to pick cotton.



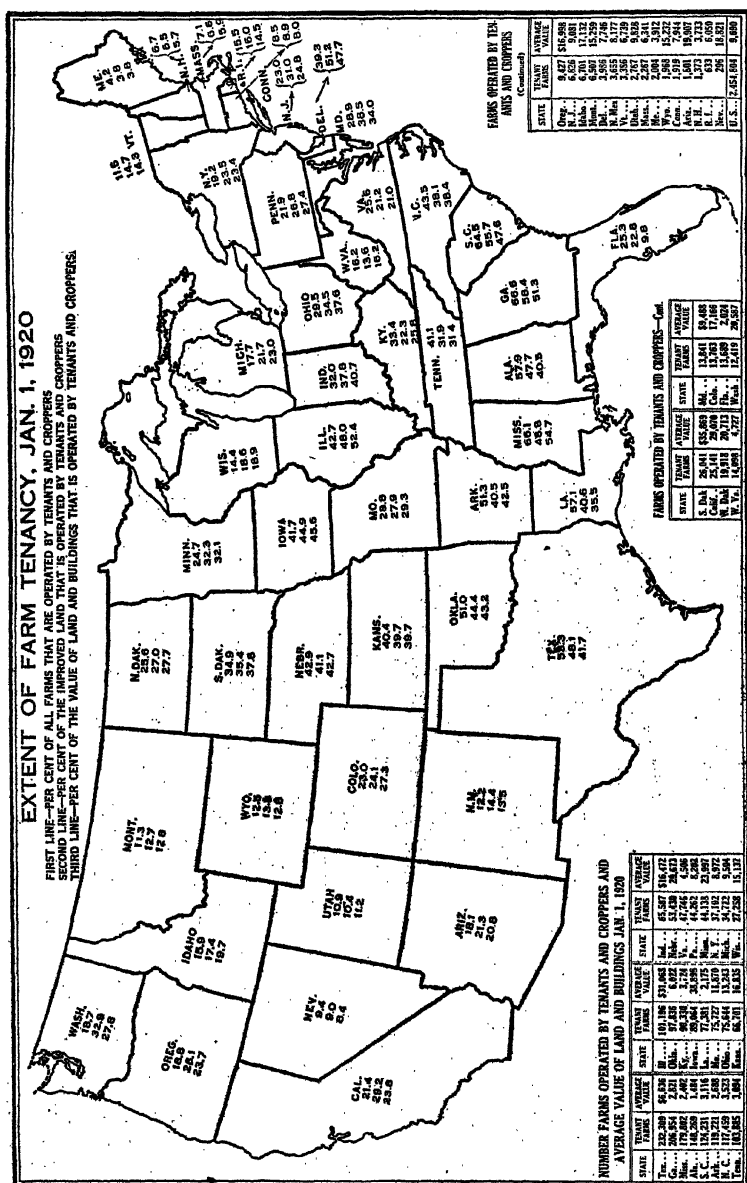


FIG. 112.—The extent of farm tenancy is commonly measured by the proportion of farmers who are tenants; but often of equal significance is the proportion of the improved land, or the proportion of the value of land and buildings included in their farms. In Illinois, for instance, less than 43 per cent of the farmers are tenants, but these tenants operate 48 per cent of the improved land, and their farms include over 52 per cent of the value of land and buildings in the State. In Alabama, on the other hand, nearly 58 per cent of the farmers are tenants, but the tenants operate only about the same proportion of improved land as the tenants in Illinois, and their farms include only about 40 per cent of the value of land and buildings.

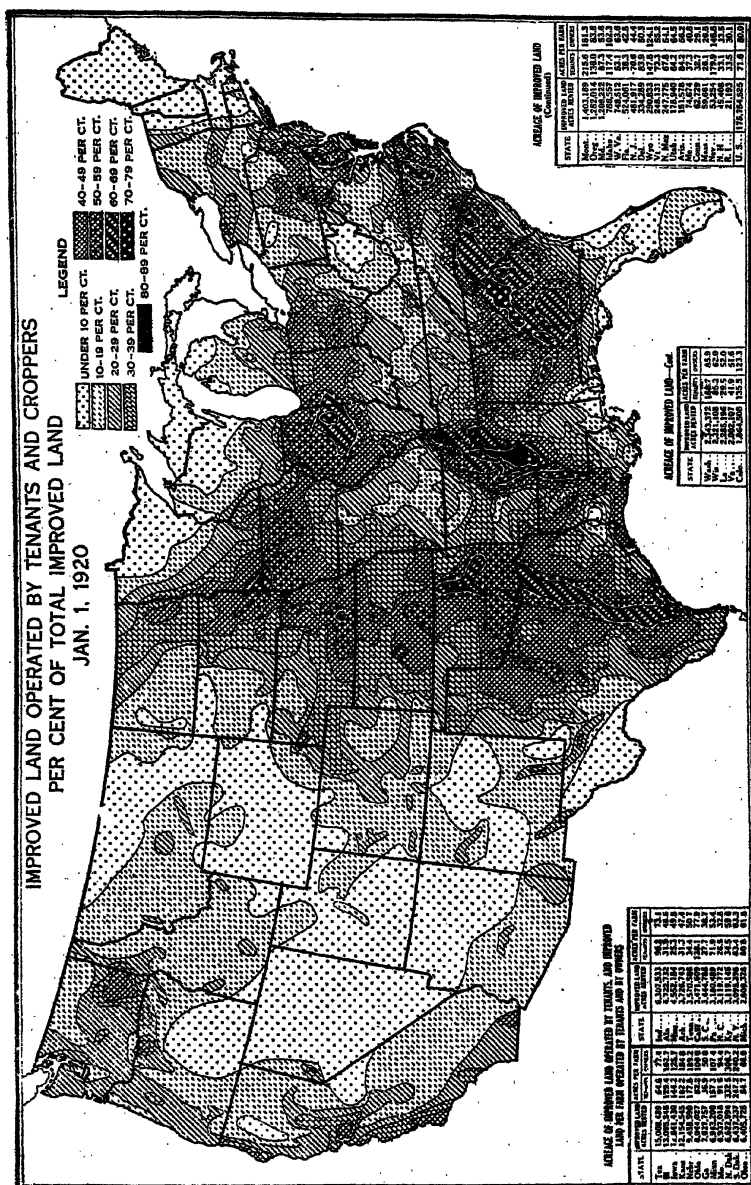


FIG. 113.—This map shows the relative extent of tenancy from the standpoint of improved land. The principal areas having over 60 per cent of the improved land operated by tenants are the richest portions of the Corn Belt and of the Cotton Belt (see Figs. 22 and 24). These are our most productive areas (see Fig. 21), in which many of the farmers or planters can afford to retire to town and be supported by the rent of their farms. The small proportion of improved land operated by tenants in the hills of New England, in the southern Appalachian Mountains, on the sandy lower coastal plain of the South, and in the arid areas of the West is noteworthy.



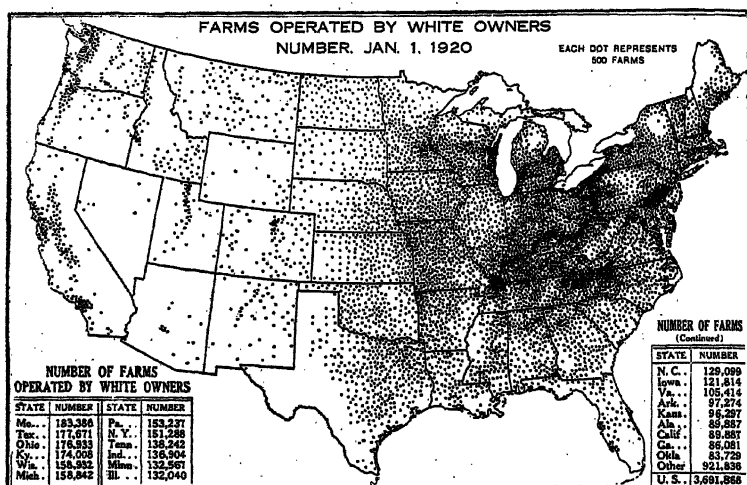


FIG. 114.—The largest number of farms operated by white owners is found among the Germans of southeastern Pennsylvania and eastern Wisconsin, the mountaineers of western Pennsylvania and the southern Appalachians, and the pioneers in the West. The fewer number of farm owner-operators in the prairie portion of the Corn Belt, as compared with the originally forested portion (see Fig. 7), is noteworthy. This is due, in part, to the larger, consequently fewer, farms (see Fig. 102), and in part to the larger proportion of tenants (see Fig. 112). The thinner distribution in northern New England, the upper Lakes region, and the West is owing to fewer farms and not to a smaller proportion of farms operated by owners (see Fig. 113).

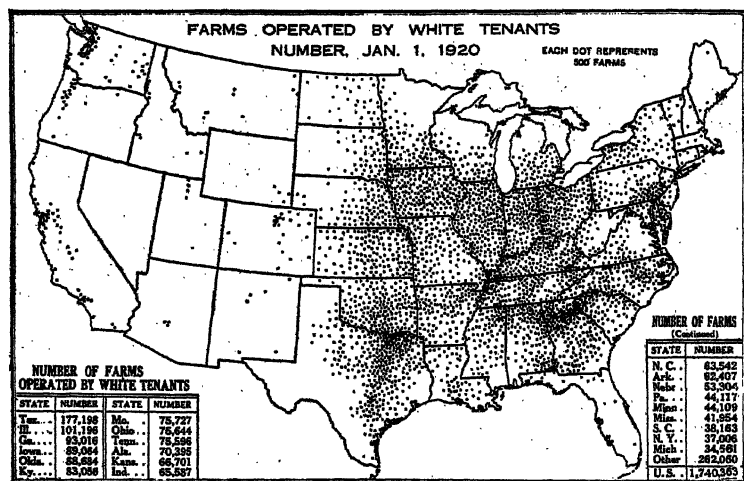


FIG. 115.—The largest number of farms operated by white tenants is in the upper Piedmont of the Carolinas, Georgia, and Alabama, and in the Black Waxy Prairie of Texas. In these districts negroes are less numerous than to the South and East, and the cotton is grown mostly by white farmers. The proportion of tenancy is about the same as in central Illinois. A large number of white tenants are shown in Kentucky and western Ohio, especially in the tobacco districts, and throughout the Corn Belt. The small number of tenants, as compared with owners (Fig. 114), is notable in the Hay and Pasture Region and in the West.

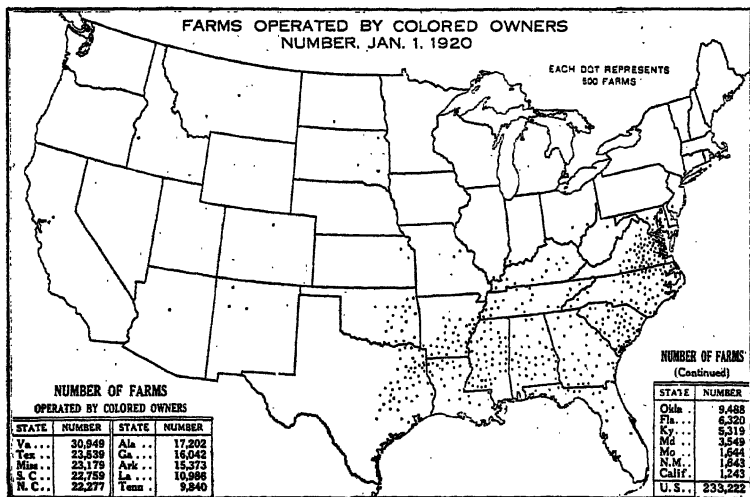


FIG. 116.—The largest number of farms operated by negro owners is found in eastern Virginia, southeastern South Carolina, and northeastern Texas, all areas of cheap land. In Virginia there are almost twice as many farms operated by negro owners as by negro tenants, and in Florida the numbers are about equal, but in the Cotton Belt tenants greatly exceed owners in number (see Fig. 117). Of the 233,222 farms in the United States operated by negro and non-white owners, only 9,153 are in the North and West. However, 71 per cent of the negro and non-white farmers in the North and West own their farms, as compared with 24 per cent in the South. The dots in the western States represent mostly farms owned and operated by Indians, Chinese, and Japanese.

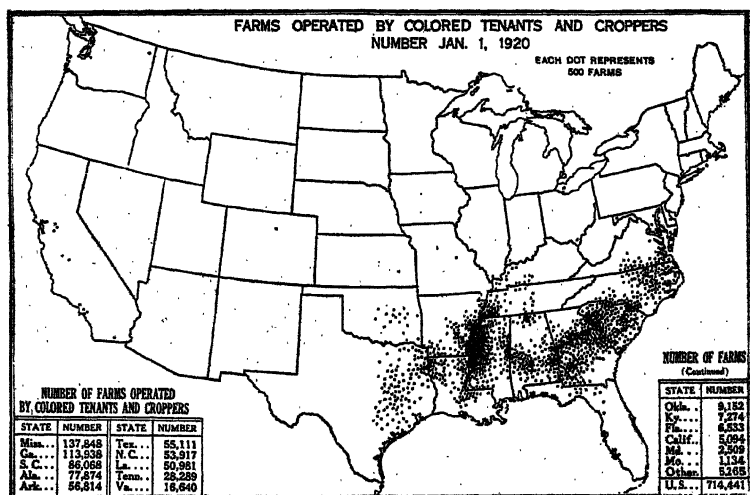


FIG. 117.—The negro tenant and cropper farms or holdings are located mostly in the Yazoo-Mississippi Delta, in the Black Prairie of Alabama, and in the upper Coastal Plain and Piedmont of Georgia and the Carolinas—districts having the richest soils in the old South. Many of these "farms" are merely allotments to croppers on plantations, the owner of the plantation furnishing the "cropper" with his mule, his farm implements, and sometimes, even, with food, until the crop is "made" in the fall and the proceeds divided between them. Negro tenants are much fewer in Texas because of historical reasons. The dots shown in California represent mostly Japanese and Chinese tenant farmers.

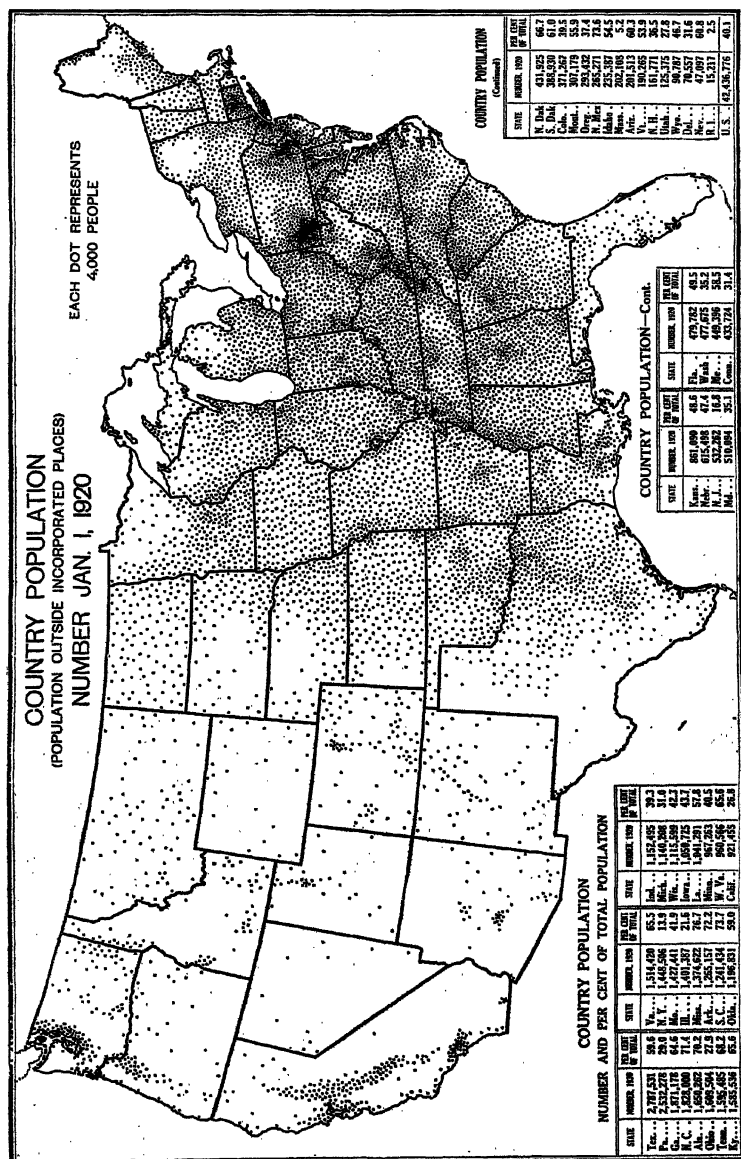


FIG. 118.—Statistics of population outside incorporated places, although including many suburbanites, mill workers, and miners, especially in Pennsylvania, afforded the closest approximation to farm population prior to June, 1922. In the 1920 census the enumerators indicated for the first time persons living on farms. The resulting tabulation shows 31,614,000 people, or about three-fourths those living outside incorporated places. However, a map of farm population showing distribution by counties, like the map above, could not be prepared, as the statistics were tabulated only by States. Figure 97, showing number of farms, may be used to compare the relative density of farm population in different parts of the United States, since the number of people per farm ranges from four to five in most States, except in the South, where there are five to six.

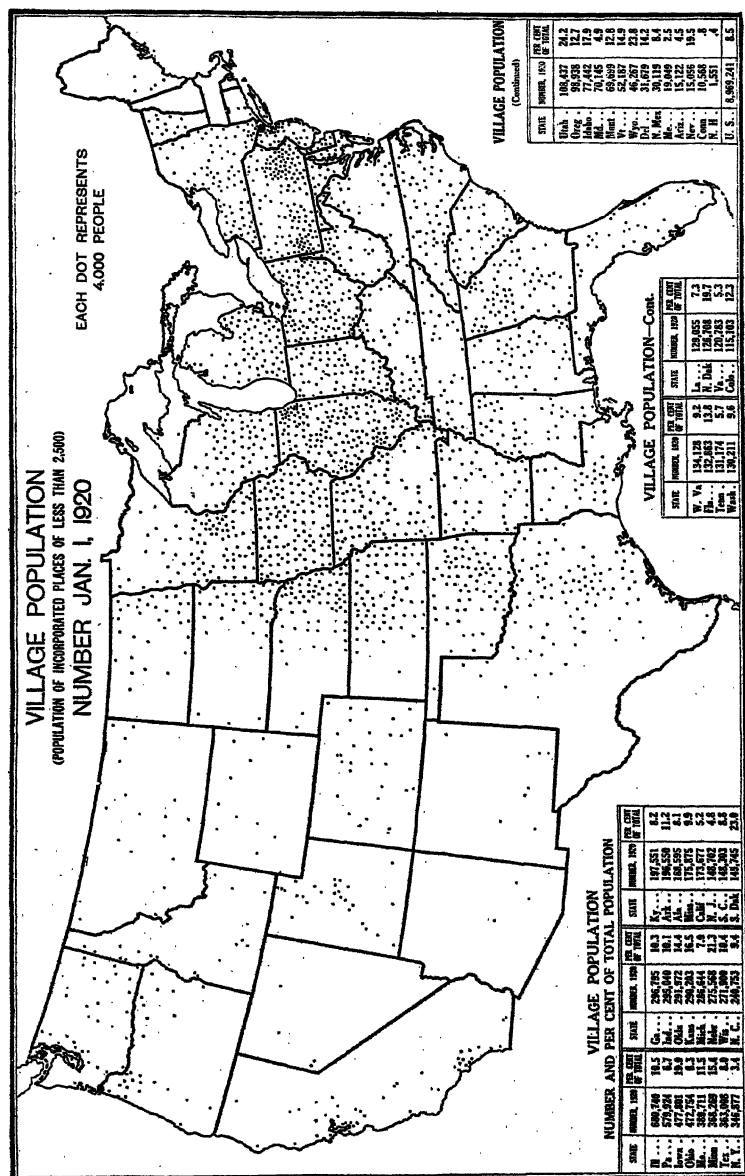


FIG. 119.—"Village" population includes many people living on farms within the village limits. It includes also many retired farmers, especially in the Corn Belt and in the South and West, and tradesmen who serve the farmers' needs. In the Northeast a considerable factory population resides in villages. The geographic distribution of village population in the Corn Belt, and in the Spring Wheat and the southwestern portion of the Hay and Pasture regions, is remarkably uniform. Whereas, farm population and country population (see Figs. 97 and 118) are densest in the South and East, village population is densest in the Corn Belt. It is also relatively dense in Utah, where many of the Mormon farmers live in villages.

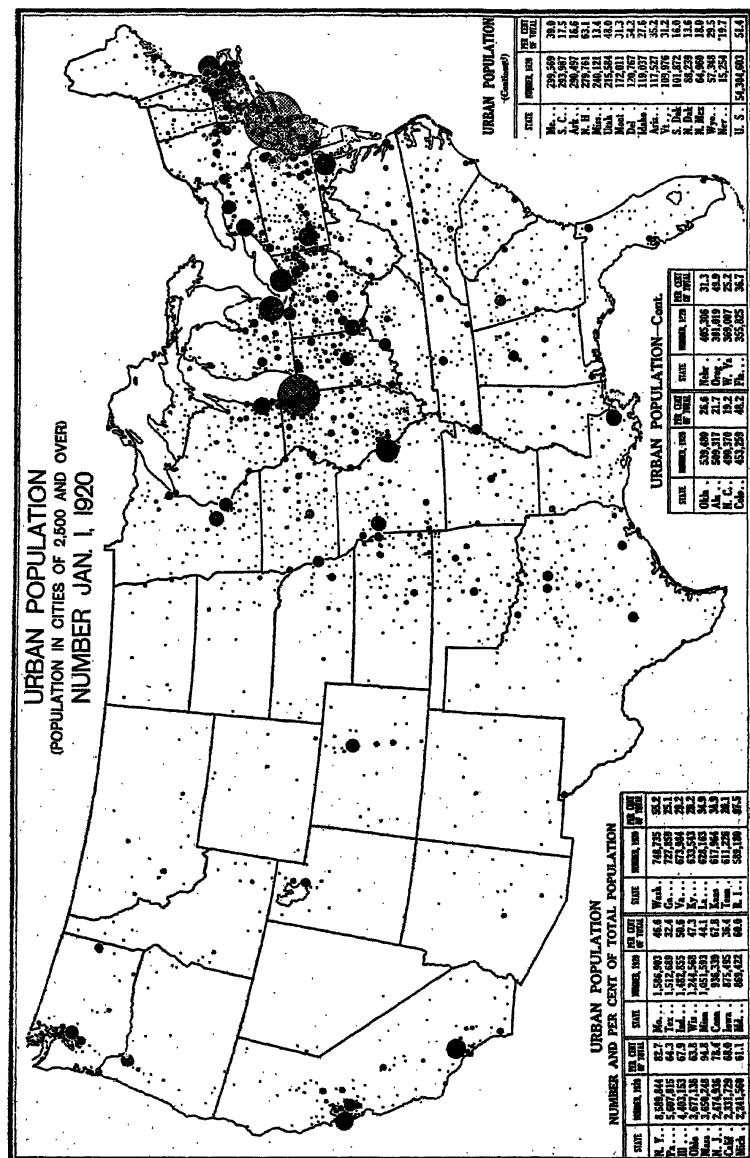


FIG. 120.—Over half of the urban population in the United States resides within the Hay and Pasture Region. The urban population in this region constitutes nearly three-fourths of its total population, and over one-fourth of the total population of the United States. Into this region the food and fibers of the West and South constantly move. The center of urban population, however, is located in the eastern portion of the Corn Belt, near Piqua, Ohio; while the center of agricultural production is over 400 miles to the west, near Jefferson City, Mo. Outside this Hay and Pasture Region the principal centers of urban population are found along the northern margin of the Corn and Winter Wheat Region, and on or near the Pacific coast. Towns of 2,500 to 10,000 population are shown by the smaller size dot; larger cities by circles of varying size.

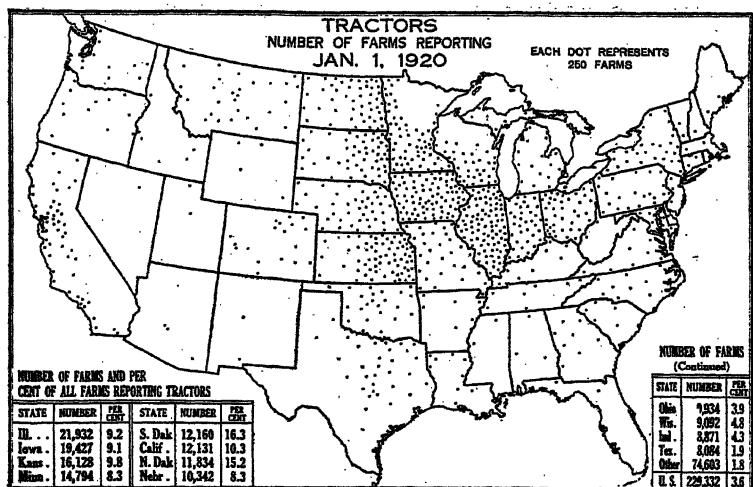


FIG. 121.—Tractors are most numerous in the Corn Belt, in the Spring and Winter Wheat Areas, and in California. In the Spring Wheat Area, on January 1, 1920, about 1 farm in 6 had a tractor; in the Corn Belt, in Kansas, and in California about 1 farm in 10; elsewhere in the United States 1 farm in 20 to 50, except in the States south of the Ohio and Potomac Rivers, where less than 1 farm in 100 had a tractor. The acreage of cotton a farmer can handle is not limited by the acreage he can plow and plant, as with wheat, or can cultivate, as with corn, but by the amount he can pick, and a tractor can not help in picking cotton.

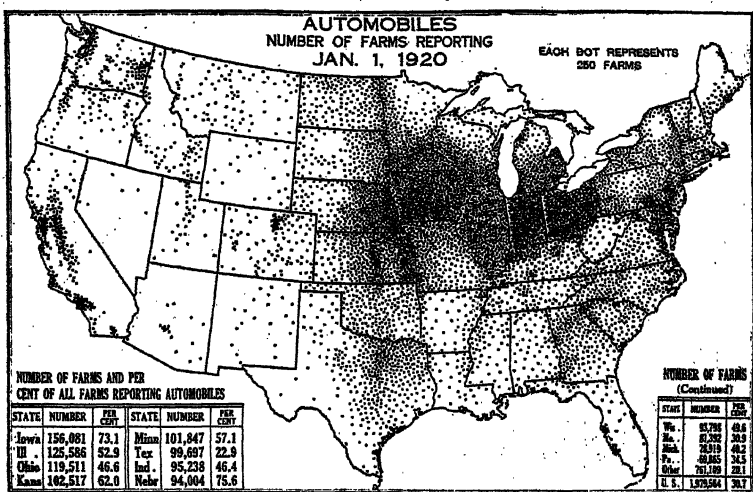


FIG. 122.—Two-fifths of the 2,000,000 automobiles on farms in the United States, January 1, 1920, were in the Corn Belt (see Fig. 104). From one-half in the eastern portion to three-fourths of the farms in the western portion of the Corn Belt had automobiles, and about half the farms in Wisconsin, Minnesota, the Dakotas, and California. Eastward from the Corn Belt the proportion drops to one-third of the farms in New York and one-fourth in New England; southward it drops to one-seventh in the Carolinas and Georgia and to one-twentieth in Mississippi. An automobile is of little help to a negro cropper, or even a poor white tenant in the South, either in marketing his cotton or in attending to his business.

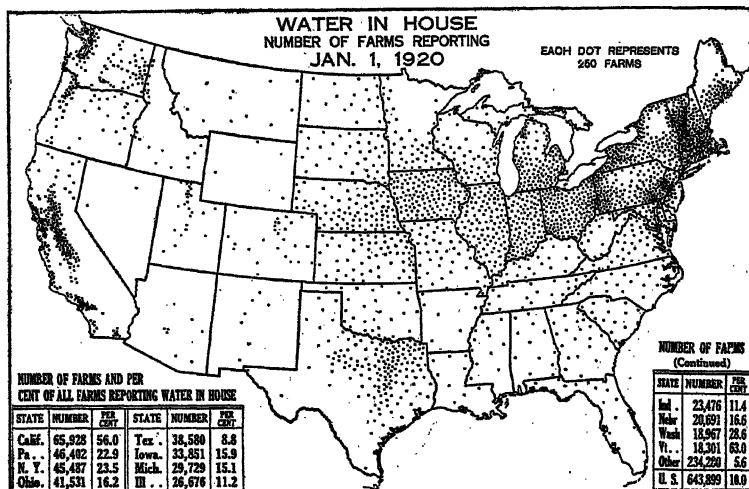


FIG. 123.—About one-half of the farms in New England and in California have water piped into the house, about one-fourth of the farms in New York, Pennsylvania, Oregon, and Washington; about one-eighth of the farms in the Corn Belt; and 1 farm in 50 to 100 in the Cotton Belt. These differences are due, in part, to differences in per capita rural wealth in the several sections of the United States, and in the percentage of tenancy; and in part to differences in the consideration shown for the health and comfort of the housewife.

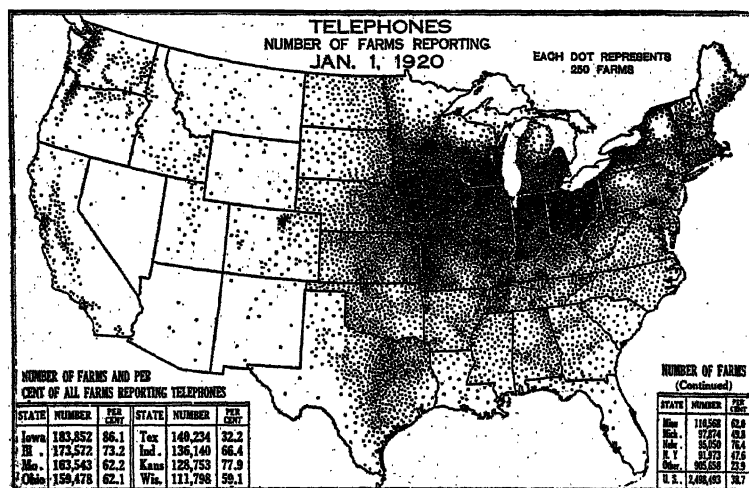


FIG. 124.—Telephones are most common on the farms of the Corn Belt and of Kansas, in which region from 60 to 90 per cent, varying with the State, possess this convenience. In the Hay and Pasture, the Spring Wheat, and the Pacific Coast Regions about half the farms have telephones; in Texas and Oklahoma about one-third of the farms; in the Corn and Winter Wheat Region (except Kansas), in the Great Plains and the Rocky Mountain Regions about a quarter of the farms; but in the Cotton Belt, east of Texas and Oklahoma, only from 5 to 15 per cent. The proportion of the farms possessing a telephone is indicative of the general diffusion of rural progress and prosperity.

# APPENDIX.

## STATISTICS OF GRAIN CROPS, 1921.

### CORN.

TABLE 1.—*Corn: Area and production in undermentioned countries, 1909-1921.*

| Country.                        | Area.                              |                    |                    |                 | Production.                        |                      |                     |                     |
|---------------------------------|------------------------------------|--------------------|--------------------|-----------------|------------------------------------|----------------------|---------------------|---------------------|
|                                 | Average<br>1909-1913. <sup>1</sup> | 1919               | 1920               | 1921            | Average<br>1909-1913. <sup>1</sup> | 1919                 | 1920                | 1921                |
| <b>NORTH AMERICA.</b>           | 1,000<br>acres.                    | 1,000<br>acres.    | 1,000<br>acres.    | 1,000<br>acres. | 1,000<br>bushels.                  | 1,000<br>bushels.    | 1,000<br>bushels.   | 1,000<br>bushels.   |
| United States.....              | 104,229                            | 97,170             | 101,699            | 103,850         | 2,708,384                          | 2,511,802            | 3,208,584           | 3,080,372           |
| Canada:                         |                                    |                    |                    |                 |                                    |                      |                     |                     |
| Ontario.....                    | 291                                | 221                | 244                | 251             | 17,436                             | 15,152               | 12,915              | 13,542              |
| Quebec.....                     | 24                                 | 44                 | 48                 | 46              | 736                                | 1,788                | 1,420               | 1,362               |
| Other.....                      |                                    |                    |                    |                 | 6                                  |                      |                     |                     |
| Total, Canada..                 | 315                                | 265                | 292                | 297             | 18,178                             | 16,940               | 14,335              | 14,904              |
| Mexico.....                     | 11,554                             |                    |                    |                 | 164,657                            |                      |                     |                     |
| Total, North<br>America.....    | 116,038                            |                    |                    |                 | 2,891,169                          |                      |                     |                     |
| <b>SOUTH AMERICA.</b>           |                                    |                    |                    |                 |                                    |                      |                     |                     |
| Argentina.....                  | 8,128                              | 9,800              | 8,184              | 8,090           | 174,502                            | 240,144              | 258,690             | 230,423             |
| Chile.....                      | 56                                 | 65                 |                    | 57              | 1,390                              | 1,702                | 1,702               | 1,805               |
| Uruguay.....                    | 551                                | 552                | 495                |                 | 6,027                              | 6,574                | 2,784               |                     |
| Total, South<br>America.....    | 8,735                              | 10,417             |                    |                 | 181,919                            | 248,420              | 263,176             |                     |
| <b>EUROPE.</b>                  |                                    |                    |                    |                 |                                    |                      |                     |                     |
| Austria.....                    | <sup>2</sup> 761                   | 104                | 102                |                 | <sup>3</sup> 14,536                | 2,115                | 2,122               | 2,456               |
| Bosnia Herzegovina <sup>2</sup> | 578                                |                    |                    |                 | 9,111                              |                      |                     |                     |
| Croatia Slavonia <sup>2</sup>   | 1,036                              |                    |                    |                 | 24,873                             |                      |                     |                     |
| Bulgaria.....                   | <sup>2</sup> 1,544                 | 1,392              | 1,399              | 1,418           | <sup>2</sup> 28,219                | 39,412               | 34,427              | 34,385              |
| Czechoslovakia.....             |                                    |                    | 376                | 363             | <sup>4</sup> 448                   | 9,648                | 10,501              | 10,501              |
| France.....                     | <sup>2</sup> 1,155                 | 744                | 829                | 810             | <sup>2</sup> 22,229                | 10,113               | 15,267              | 12,209              |
| Greece.....                     |                                    |                    | 519                | 492             |                                    |                      | 9,133               | 7,874               |
| Hungary.....                    | <sup>2</sup> 6,038                 |                    | 2,017              | 1,950           | <sup>2</sup> 168,081               |                      | 50,156              | 27,141              |
| Italy.....                      | 3,931                              | 3,709              | 3,710              | 3,707           | 100,349                            | 85,846               | 89,299              | 94,484              |
| Portugal.....                   |                                    | 597                |                    |                 | 15,000                             | 6,495                |                     |                     |
| Rumania.....                    | <sup>2</sup> 5,143                 | <sup>6</sup> 6,751 | <sup>7</sup> 7,330 | 6,959           | <sup>2</sup> 100,620               | <sup>4</sup> 137,412 | <sup>2</sup> 92,552 | <sup>7</sup> 99,036 |
| Russia proper.....              | <sup>2</sup> 3,173                 |                    |                    |                 | <sup>2</sup> 59,571                |                      |                     |                     |
| Northern Caucasus.....          | <sup>2</sup> 1,750                 |                    |                    |                 | <sup>2</sup> 13,651                |                      |                     |                     |
| Serbia.....                     | <sup>2</sup> 1,445                 |                    |                    |                 | <sup>2</sup> 28,128                |                      |                     |                     |
| Spain.....                      | 1,134                              | 1,179              | 1,168              | 1,181           | 26,548                             | 25,555               | 27,693              | 28,048              |
| Switzerland.....                |                                    | 6                  | 6                  | 5               |                                    | 257                  | 280                 | 218                 |
| Yugoslavia.....                 |                                    |                    | 3,018              |                 |                                    | 64,753               | 88,556              |                     |
| Total, Europe..                 | 26,688                             |                    |                    |                 | 607,918                            |                      |                     |                     |
| <b>ASIA.</b>                    |                                    |                    |                    |                 |                                    |                      |                     |                     |
| British India.....              | 6,340                              | 6,039              | 6,616              |                 | 87,240                             | 71,288               | 98,700              |                     |
| Japan.....                      | 130                                | 137                | 139                |                 | 3,637                              |                      |                     |                     |
| Philippine Islands..            | 992                                | 1,064              | 1,327              |                 | 7,446                              | 13,095               | 16,978              | 18,108              |
| Total, Asia....                 | 7,462                              | 7,240              | 8,082              |                 | 98,323                             |                      |                     |                     |
| <b>AFRICA.</b>                  |                                    |                    |                    |                 |                                    |                      |                     |                     |
| Algeria.....                    | 34                                 | 15                 | 22                 | 24              | 461                                | 236                  | 254                 | 358                 |
| Tunis.....                      | 43                                 | 45                 | 25                 | 50              |                                    | 257                  | 110                 | 315                 |
| Egypt.....                      | 1,857                              | 1,792              | 1,938              |                 | 64,220                             | 63,977               | 70,569              |                     |
| French Morocco.....             |                                    | 475                | 309                | 375             |                                    | 3,114                | 3,436               | 3,728               |
| Union of South Africa           |                                    | 3,952              | 3,122              | 3,483           | 26,498                             | 41,422               | 43,916              | 43,820              |
| Total, Africa..                 |                                    | 6,279              | 5,416              |                 |                                    | 109,006              | 118,285             |                     |

<sup>1</sup> Five-year average, except in a few cases where statistics were unavailable.

<sup>2</sup> Old boundaries.

<sup>3</sup> Bohemia, Silesia, and Moravia.

<sup>4</sup> Former Kingdom, Bessarabia, and Bukovina.

<sup>5</sup> Former Kingdom, Bessarabia, Bukovina and Transylvania.

<sup>6</sup> Former Kingdom, and Bessarabia only.

<sup>7</sup> Winchester bushels.



## CORN—Continued.

TABLE 1.—Corn: Area and production in undermentioned countries, 1909–1921—Con.

| Country.               | Area.                   |                         |                         |                         | Production.               |                           |                           |                           |
|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|                        | Average<br>1909–1913.   | 1919                    | 1920                    | 1921                    | Average<br>1909–1913.     | 1919                      | 1920                      | 1921                      |
| <b>AUSTRALASIA.</b>    |                         |                         |                         |                         |                           |                           |                           |                           |
| <i>Australia:</i>      | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| Queensland.....        | 143                     | 150                     | 105                     | .....                   | 3,280                     | 4,106                     | 1,531                     | .....                     |
| New South Wales.....   | 190                     | 115                     | 137                     | .....                   | 6,091                     | 2,002                     | 4,052                     | .....                     |
| Victoria.....          | 18                      | 23                      | 23                      | .....                   | 887                       | 712                       | 879                       | .....                     |
| Western Australia..... | .....                   | <sup>(8)</sup>          | <sup>(8)</sup>          | .....                   | 1                         | 1                         | <sup>(8)</sup>            | .....                     |
| South Australia.....   | 1                       | <sup>(8)</sup>          | <sup>(8)</sup>          | .....                   | 5                         | 2                         | 2                         | .....                     |
| Total, Australia.....  | 352                     | 288                     | 265                     | .....                   | 10,264                    | 6,913                     | 6,764                     | .....                     |
| New Zealand.....       | 10                      | 10                      | 9                       | 11                      | 493                       | 415                       | 406                       | 439                       |
| Total Australasia..... | 362                     | 298                     | 274                     | .....                   | 10,757                    | 7,328                     | 7,170                     | .....                     |
| Grand total.....       | 161,279                 | .....                   | .....                   | .....                   | 3,831,263                 | .....                     | .....                     | .....                     |

\* Less than 500.

TABLE 2.—Corn: World production so far as reported, 1895–1921.

| Year.     | Production.     | Year.     | Production.     | Year.     | Production.     | Year.     | Production.     |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |
| 1895..... | 2,834,750,000   | 1902..... | 3,187,311,000   | 1909..... | 3,563,228,000   | 1916..... | 3,308,818,000   |
| 1896..... | 2,964,435,000   | 1903..... | 3,068,506,000   | 1910..... | 4,031,630,000   | 1917..... | 3,540,563,000   |
| 1897..... | 2,537,206,000   | 1904..... | 3,108,252,000   | 1911..... | 3,431,007,000   | 1918..... | 3,128,473,000   |
| 1898..... | 2,632,619,000   | 1905..... | 3,431,181,000   | 1912..... | 4,371,638,000   | 1919..... | 3,646,518,000   |
| 1899..... | 2,724,100,000   | 1906..... | 3,933,645,000   | 1913..... | 3,587,429,000   | 1920..... | 4,144,821,000   |
| 1900..... | 2,792,581,000   | 1907..... | 3,420,321,000   | 1914..... | 3,777,913,000   | 1921..... | 3,716,115,000   |
| 1901..... | 2,366,833,000   | 1908..... | 3,606,931,000   | 1915..... | 4,231,780,000   |           |                 |

TABLE 3.—Corn: Average yield per acre in undermentioned countries, 1890–1921.

| Year.           | United<br>States. | Russia<br>(Euro-<br>pean). <sup>1</sup> | Italy.          | Austria.        | Hungary<br>(proper). | France.         | Argen-<br>tina. |
|-----------------|-------------------|---|-----------------|-----------------|----------------------|-----------------|-----------------|
| <i>Average:</i> | <i>Bushels.</i>   | <i>Bushels.</i>                         | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>      | <i>Bushels.</i> | <i>Bushels.</i> |
| 1890–1899.....  | 21.5              | 12.6                                    | 15.3            | 19.5            | 23.0                 | 19.1            | .....           |
| 1900–1909.....  | 25.8              | 13.9                                    | 21.4            | 18.9            | 22.2                 | 18.9            | 25.6            |
| 1910–1919.....  | 26.2              | * 16.7                                  | 24.7            | 21.0            | * 23.0               | 17.8            | 19.2            |
| 1919.....       | 28.9              | .....                                   | 23.1            | 20.3            | .....                | 15.9            | 24.5            |
| 1920.....       | 31.5              | .....                                   | 24.1            | 20.8            | 24.9                 | 13.6            | 31.6            |
| 1921.....       | 29.7              | .....                                   | .....           | .....           | 13.9                 | 17.2            | 28.5            |

<sup>1</sup> Excludes Poland.

\* 7-year average.

\* 6-year average.

CORN—Continued.

TABLE 4.—*Corn: Acreage, production, value, exports, etc., in the United States, 1849-1921.*

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of acres are obtained by applying estimated percentages of increase or decrease to the published acreage of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. Acreages have been revised for years 1890-1908, so as to be consistent with the following as well as the preceding census acreage, and total production and farm values are adjusted accordingly.

| Year.                   | Acreage<br>(000 omitted). | Average<br>yield<br>per<br>acre. | Production (000 omitted). | Average<br>farm<br>price<br>per<br>bushel<br>Dec. 1. | Farm<br>value<br>Dec. 1<br>(000 omitted). | Chicago cash<br>price per bushel,<br>contract. <sup>1</sup> |       |                     |       | Domestic<br>exports,<br>including<br>corn meal,<br>fiscal year<br>beginning<br>July 1. | Imports<br>during<br>fiscal year<br>beginning<br>July 1. | Per<br>cent<br>of crop<br>ex-<br>ported |
|-------------------------|---------------------------|----------------------------------|---------------------------|--|---|---|-------|---------------------|-------|--|--|---|
|                         |                           |                                  |                           |  |   | Decem-<br>ber.  |       | Follow-<br>ing May. |       |  |  |   |
|                         |                           |                                  |                           |  |   | Low.  | High. | Low.                | High. |  |  |   |
|                         | Acres.                    | Bush.                            | Bushels.                  | Cents.   | Dollars.                                  | Cts.  | Cts.  | Cts.                | Cts.  | Bushels.   | Bushels.   | P. ct.                                  |
| 1849.....               |                           |                                  | 592,071                   |  |   |   |       |                     |       | 7,632,880  |  | 1.3                                     |
| 1859.....               |                           |                                  | 839,793                   |  |   |   |       |                     |       | 4,248,991  | 49,190   | .5                                      |
| 1866-1875.....          | 37,216                    | 26.1                             | 909,945                   | 46.9   | 454,535                                   | 46  | 55    | 50                  | 59    | 24,242,396   | 66,076   | 2.5                                     |
| 1876-1885.....          | 61,671                    | 25.4                             | 1,564,992                 | 39.5   | 617,789                                   | 42  | 48    | 44                  | 49    | 69,091,110   | 33,334   | 4.4                                     |
| 1886-1895.....          | 74,274                    | 23.8                             | 1,769,616                 | 36.7   | 648,785                                   | 38  | 43    | 40                  | 51    | 59,293,085   | 11,445   | 3.4                                     |
| 1896.....               | 86,560                    | 28.9                             | 2,503,434                 | 21.3   | 532,884                                   | 22  | 23    | 23                  | 25    | 178,817,417  | 6,284  | 7.8                                     |
| 1897.....               | 83,127                    | 24.3                             | 2,144,553                 | 26.0   | 558,309                                   | 25  | 27    | 32                  | 37    | 212,055,543  | 3,417  | 11.1                                    |
| 1898.....               | 88,340                    | 25.6                             | 2,261,119                 | 28.4   | 642,747                                   | 33  | 38    | 32                  | 34    | 177,265,046  | 4,171  | 9.2                                     |
| 1899.....               | 94,914                    | 25.9                             | 2,454,626                 | 29.9   | 734,917                                   | 30  | 31    | 36                  | 40    | 213,123,412  | 2,490  | 10.3                                    |
| 1900.....               | 95,042                    | 26.4                             | 2,505,148                 | 35.1   | 878,243                                   | 35  | 40    | 42                  | 53    | 181,405,473  | 5,169  | 8.6                                     |
| 1901.....               | 94,636                    | 17.0                             | 1,607,288                 | 60.0   | 964,543                                   | 62  | 67    | 59                  | 64    | 28,026,638   | 18,278   | 1.8                                     |
| 1902.....               | 95,517                    | 27.4                             | 2,620,699                 | 40.0   | 1,048,735                                 | 43  | 57    | 44                  | 46    | 76,639,261   | 40,919   | 3.0                                     |
| 1903.....               | 90,661                    | 25.8                             | 2,339,417                 | 42.1   | 984,173                                   | 41  | 43    | 47                  | 50    | 58,222,061   | 16,633   | 2.6                                     |
| 1904.....               | 93,340                    | 27.0                             | 2,520,682                 | 43.7   | 1,101,430                                 | 43  | 49    | 48                  | 64    | 90,298,493   | 15,443   | 3.7                                     |
| 1905.....               | 93,573                    | 29.3                             | 2,744,329                 | 40.7   | 1,116,817                                 | 42  | 50    | 47                  | 50    | 119,398,833  | 10,127   | 4.4                                     |
| 1906.....               | 93,643                    | 30.9                             | 2,895,822                 | 39.2   | 1,135,969                                 | 40  | 46    | 49                  | 56    | 96,368,228   | 10,818   | 3.0                                     |
| 1907.....               | 94,971                    | 26.5                             | 2,512,065                 | 50.9   | 1,277,607                                 | 57  | 61    | 67                  | 82    | 55,063,300   | 20,812   | 2.1                                     |
| 1908.....               | 95,693                    | 26.6                             | 2,544,957                 | 60.0   | 1,527,679                                 | 56  | 62    | 72                  | 76    | 37,665,040   | 288,065  | 1.4                                     |
| 1909.....               | 98,389                    | 26.1                             | 2,572,396                 | 58.6   | 1,507,185                                 | 62  | 66    | 56                  | 63    | 38,128,498   |  | 1.5                                     |
| 1910 <sup>1</sup> ..... | 104,085                   | 27.7                             | 2,886,260                 | 48.0   | 1,384,817                                 | 45  | 50    | 52                  | 55    | 65,614,522   |  | 2.3                                     |
| 1911.....               | 105,825                   | 23.9                             | 2,531,488                 | 61.8   | 1,565,253                                 | 68  | 70    | 76                  | 82    | 41,797,291   | 53,425   | 1.7                                     |
| 1912.....               | 107,083                   | 29.2                             | 3,124,746                 | 48.7   | 1,520,454                                 | 47  | 54    | 55                  | 60    | 50,780,143   | 903,062  | 1.6                                     |
| 1913.....               | 105,820                   | 23.1                             | 2,446,988                 | 69.1   | 1,692,092                                 | 64  | 73    | 67                  | 72    | 10,725,819   | 12,367,369   | .4                                      |
| 1914.....               | 103,435                   | 25.8                             | 2,672,804                 | 64.4   | 1,722,070                                 | 62  | 68    | 50                  | 56    | 50,668,303   | 9,397,939  | 1.9                                     |
| 1915.....               | 106,197                   | 28.2                             | 2,994,793                 | 57.5   | 1,722,680                                 | 69  | 75    | 69                  | 78    | 39,896,928   | 5,208,497  | 1.3                                     |
| 1916.....               | 105,296                   | 24.4                             | 2,566,927                 | 88.9   | 2,280,729                                 | 88  | 96    | 152                 | 174   | 66,753,294   | 2,267,299  | 2.6                                     |
| 1917.....               | 116,730                   | 20.3                             | 3,065,233                 | 127.9  | 3,920,228                                 | 160   | 190   | 150                 | 170   | 49,073,263   | 3,106,420  | 1.6                                     |
| 1918.....               | 104,467                   | 24.0                             | 2,502,665                 | 136.5  | 3,415,240                                 | 135   | 155   | 160                 | 185   | 23,018,822   | 8,311,211  | .9                                      |
| 1919 <sup>2</sup> ..... | 97,170                    | 28.9                             | 2,811,302                 | 134.5  | 3,780,597                                 | 142   | 160   | 189                 | 217   | 16,728,746   | 10,229,249   | .6                                      |
| 1920.....               | 101,699                   | 31.5                             | 3,208,584                 | 67.0   | 2,150,333                                 | 70  | 86    | 59                  | 66    | 70,908,781   | 5,743,384  | 2.2                                     |
| 1921 <sup>3</sup> ..... | 103,860                   | 29.7                             | 3,080,372                 | 42.3   | 1,302,670                                 | 46  | 51    |                     |       |  |  |   |

<sup>1</sup> No. 2 to 1908.

<sup>2</sup> Acreage adjusted to census basis.

<sup>3</sup> Preliminary estimate.

## CORN—Continued.

TABLE 5.—Corn: Acreage, production, and total farm value, by States, 1919-1921.

| State.              | Thousands of acres. |         |                   | Production (thousands of bushels). |           |                   | Total value, basis Dec. 1 price (thousands of dollars). |           |                   |
|---------------------|---------------------|---------|-------------------|------------------------------------|-----------|-------------------|---|-----------|-------------------|
|                     | 1919                | 1920    | 1921 <sup>1</sup> | 1919                               | 1920      | 1921 <sup>1</sup> | 1919  | 1920      | 1921 <sup>1</sup> |
| Maine.....          | 31                  | 29      | 30                | 1,705                              | 1,305     | 1,500             | 3,325   | 1,670     | 1,155             |
| New Hampshire.....  | 23                  | 24      | 25                | 1,070                              | 1,080     | 1,325             | 1,819   | 1,566     | 994               |
| Vermont.....        | 79                  | 81      | 82                | 3,674                              | 3,807     | 4,510             | 6,430   | 4,797     | 3,428             |
| Massachusetts.....  | 64                  | 64      | 65                | 3,347                              | 2,560     | 3,120             | 5,757   | 3,200     | 2,402             |
| Rhode Island.....   | 13                  | 14      | 14                | 585                                | 560       | 644               | 1,088   | 1,008     | 708               |
| Connecticut.....    | 74                  | 74      | 74                | 3,700                              | 2,960     | 3,348             | 6,660   | 4,144     | 3,463             |
| New York.....       | 762                 | 767     | 798               | 32,766                             | 30,680    | 36,708            | 54,392  | 35,589    | 24,594            |
| New Jersey.....     | 261                 | 236     | 241               | 10,440                             | 10,384    | 11,327            | 15,973  | 8,326     | 6,003             |
| Pennsylvania.....   | 1,581               | 1,556   | 1,589             | 74,307                             | 70,020    | 76,272            | 109,231   | 70,020    | 41,950            |
| Delaware.....       | 178                 | 173     | 177               | 5,340                              | 6,488     | 6,549             | 7,743   | 4,866     | 2,947             |
| Maryland.....       | 645                 | 650     | 645               | 20,445                             | 25,025    | 25,155            | 37,023  | 20,270    | 12,326            |
| Virginia.....       | 1,868               | 1,834   | 1,904             | 52,304                             | 56,520    | 47,600            | 88,394  | 56,520    | 32,844            |
| West Virginia.....  | 600                 | 600     | 592               | 20,400                             | 20,400    | 20,123            | 33,456  | 23,664    | 15,096            |
| North Carolina..... | 2,531               | 2,428   | 2,552             | 48,089                             | 54,630    | 49,254            | 88,965  | 61,732    | 38,418            |
| South Carolina..... | 1,796               | 1,830   | 2,022             | 28,736                             | 34,770    | 32,959            | 56,610  | 40,333    | 24,390            |
| Georgia.....        | 4,376               | 4,393   | 4,655             | 63,452                             | 65,895    | 69,975            | 101,523   | 60,190    | 37,087            |
| Florida.....        | 800                 | 750     | 758               | 12,000                             | 10,125    | 11,032            | 16,800  | 10,125    | 5,847             |
| Ohio.....           | 3,943               | 3,955   | 3,886             | 169,549                            | 172,081   | 159,326           | 205,154   | 117,015   | 65,324            |
| Indiana.....        | 4,832               | 4,834   | 4,718             | 180,634                            | 195,777   | 169,848           | 225,792   | 115,508   | 62,844            |
| Illinois.....       | 8,579               | 9,079   | 8,999             | 308,844                            | 314,133   | 305,966           | 401,497   | 185,338   | 116,267           |
| Michigan.....       | 1,641               | 1,706   | 1,703             | 60,717                             | 66,534    | 66,417            | 83,789  | 54,558    | 31,880            |
| Wisconsin.....      | 1,832               | 2,067   | 2,110             | 84,690                             | 89,294    | 97,482            | 105,362   | 68,756    | 44,842            |
| Minnesota.....      | 2,998               | 3,283   | 3,427             | 119,920                            | 123,300   | 140,507           | 143,904   | 62,883    | 43,557            |
| Iowa.....           | 9,959               | 10,300  | 10,330            | 414,294                            | 473,800   | 444,190           | 497,153   | 222,686   | 133,257           |
| Missouri.....       | 5,962               | 6,646   | 6,096             | 160,974                            | 212,672   | 182,880           | 222,144   | 136,110   | 76,152            |
| North Dakota.....   | 432                 | 569     | 605               | 14,256                             | 13,656    | 16,940            | 19,958  | 9,832     | 5,760             |
| South Dakota.....   | 3,228               | 3,650   | 3,926             | 93,708                             | 109,500   | 126,632           | 111,513   | 45,990    | 32,664            |
| Nebraska.....       | 7,030               | 7,560   | 7,419             | 184,186                            | 255,528   | 207,732           | 224,707   | 104,766   | 56,038            |
| Kansas.....         | 4,188               | 5,007   | 4,601             | 63,658                             | 132,686   | 102,142           | 89,121  | 58,382    | 31,664            |
| Kentucky.....       | 3,454               | 3,334   | 3,209             | 82,896                             | 101,687   | 82,150            | 128,499   | 83,383    | 45,182            |
| Tennessee.....      | 3,448               | 3,511   | 3,516             | 73,744                             | 98,308    | 90,713            | 115,778   | 85,528    | 47,171            |
| Alabama.....        | 3,655               | 3,593   | 4,042             | 52,998                             | 56,410    | 62,651            | 84,267  | 55,282    | 38,844            |
| Mississippi.....    | 2,845               | 2,770   | 3,172             | 42,675                             | 44,320    | 57,096            | 68,280  | 45,206    | 31,974            |
| Louisiana.....      | 1,523               | 1,599   | 1,796             | 26,652                             | 30,125    | 35,022            | 39,978  | 25,606    | 22,764            |
| Texas.....          | 5,016               | 5,487   | 6,227             | 150,480                            | 142,662   | 156,920           | 177,566   | 119,836   | 84,737            |
| Oklahoma.....       | 2,611               | 2,820   | 3,077             | 62,664                             | 78,960    | 76,925            | 79,583  | 42,638    | 24,616            |
| Arkansas.....       | 2,328               | 2,330   | 2,734             | 41,904                             | 54,522    | 60,148            | 68,723  | 52,886    | 34,284            |
| Montana.....        | 133                 | 184     | 200               | 532                                | 2,560     | 2,560             | 878   | 1,781     | 1,715             |
| Wyoming.....        | 44                  | 50      | 58                | 704                                | 1,200     | 1,232             | 1,162   | 672       | 616               |
| Colorado.....       | 1,021               | 1,182   | 1,102             | 15,815                             | 24,231    | 15,979            | 21,747  | 10,902    | 4,953             |
| New Mexico.....     | 254                 | 276     | 290               | 5,486                              | 5,989     | 6,409             | 8,284   | 6,583     | 5,768             |
| Arizona.....        | 31                  | 29      | 35                | 899                                | 638       | 1,015             | 1,793   | 1,085     | 1,015             |
| Utah.....           | 20                  | 24      | 21                | 384                                | 526       | 517               | 576   | 789       | 893               |
| Nevada.....         | 1                   | 1       | 1                 | 27                                 | 32        | 29                | 35  | 51        | 35                |
| Idaho.....          | 40                  | 45      | 47                | 1,280                              | 1,620     | 1,598             | 2,112   | 1,620     | 799               |
| Washington.....     | 61                  | 62      | 60                | 2,196                              | 2,232     | 2,400             | 4,063   | 2,790     | 2,064             |
| Oregon.....         | 72                  | 69      | 66                | 1,908                              | 2,139     | 1,980             | 2,957   | 2,781     | 1,663             |
| California.....     | 149                 | 139     | 116               | 4,768                              | 4,587     | 4,060             | 8,535   | 5,504     | 3,126             |
| United States.....  | 97,170              | 101,699 | 103,850           | 2,811,302                          | 3,208,584 | 3,080,372         | 3,780,597   | 2,150,332 | 1,302,670         |

<sup>1</sup> Preliminary estimate.

# Statistics of Corn.

511

## CORN—Continued.

TABLE 6.—Corn: Production and distribution in the United States, 1897–1921.

[000 omitted under bushels.]

| Year.          | Old stock on farms Nov. 1. | Crop.     |          |                          |           |           | Total supplies. | Stock on farms Mar. 1 following. | Shipped out of county where grown. |
|----------------|----------------------------|-----------|----------|--------------------------|-----------|-----------|-----------------|----------------------------------|------------------------------------|
|                |                            | Quantity. | Quality. | Proportion merchantable. |           |           |                 |                                  |                                    |
|                |                            | Bushels.  | Bushels. | Per cent.                | Per cent. | Bushels.  | Bushels.        | Bushels.                         | Bushels.                           |
| 1897-1901..... | 146,125                    | 1,906,584 | 83.3     | 85.6                     | 1,713,997 | 2,052,709 | 706,836         | 357,470                          |                                    |
| 1902-1906..... | 88,528                     | 2,574,143 | 88.1     | 82.9                     | 2,144,808 | 2,662,671 | 1,050,063       | 577,978                          |                                    |
| 1907.....      | 130,965                    | 2,532,320 | 82.8     | 77.7                     | 2,013,208 | 2,723,315 | 962,429         | 467,675                          |                                    |
| 1908.....      | 71,124                     | 2,668,651 | 86.9     | 83.2                     | 2,353,370 | 2,739,775 | 1,047,763       | 568,129                          |                                    |
| 1909.....      | 79,779                     | 2,552,190 | 84.2     | 82.5                     | 2,104,775 | 2,631,969 | 977,561         | 635,243                          |                                    |
| 1910.....      | 115,606                    | 2,886,260 | 87.2     | 86.4                     | 2,492,763 | 3,001,956 | 1,165,378       | 661,777                          |                                    |
| 1911.....      | 123,824                    | 2,581,488 | 80.6     | 80.1                     | 2,027,922 | 2,655,312 | 884,069         | 517,766                          |                                    |
| 1912.....      | 64,764                     | 3,124,746 | 85.5     | 85.0                     | 2,654,907 | 3,189,510 | 1,290,642       | 680,831                          |                                    |
| 1913.....      | 137,972                    | 2,446,988 | 82.2     | 80.1                     | 1,961,058 | 2,584,960 | 866,352         | 422,059                          |                                    |
| 1914.....      | 80,046                     | 2,672,804 | 85.1     | 84.5                     | 2,259,755 | 2,752,850 | 910,894         | 498,285                          |                                    |
| 1915.....      | 96,009                     | 2,994,793 | 77.2     | 71.1                     | 2,127,965 | 3,090,802 | 1,116,559       | 560,824                          |                                    |
| 1916.....      | 87,908                     | 2,566,927 | 83.8     | 83.9                     | 2,154,437 | 2,654,835 | 782,303         | 450,589                          |                                    |
| 1917.....      | 34,448                     | 3,065,233 | 75.2     | 60.0                     | 1,837,728 | 3,099,681 | 1,253,290       | 678,027                          |                                    |
| 1918.....      | 114,678                    | 2,502,665 | 85.6     | 82.4                     | 2,062,041 | 2,617,343 | 855,269         | 362,589                          |                                    |
| 1919.....      | 69,835                     | 2,811,302 | 89.1     | 87.1                     | 2,448,204 | 2,831,137 | 1,045,575       | 470,328                          |                                    |
| 1920.....      | 139,083                    | 3,208,584 | 89.6     | 88.9                     | 2,789,720 | 3,347,667 | 1,564,332       | 705,481                          |                                    |
| 1921.....      | 285,769                    | 3,080,372 | 84.0     | 87.5                     | 2,695,194 | 3,366,141 | 1,313,120       | 590,505                          |                                    |

TABLE 7.—Corn: Condition of crop, United States, on first of months named, 1901–1921.

| Year.   | July. | Aug.  | Sept. | Oct.  | Year.   | July. | Aug.  | Sept. | Oct.  | Year.   | July. | Aug.  | Sept. | Oct.  |
|---------|-------|-------|-------|-------|---------|-------|-------|-------|-------|---------|-------|-------|-------|-------|
|         | P. c. | P. c. | P. c. | P. c. |         | P. c. | P. c. | P. c. | P. c. |         | P. c. | P. c. | P. c. | P. c. |
| 1901... | 81.3  | 84.0  | 81.7  | 82.1  | 1908... | 82.8  | 82.5  | 79.4  | 77.8  | 1915... | 81.2  | 79.5  | 78.8  | 79.7  |
| 1902... | 87.5  | 86.5  | 84.3  | 79.6  | 1909... | 89.3  | 84.4  | 74.6  | 73.8  | 1916... | 82.0  | 75.3  | 71.3  | 71.5  |
| 1903... | 79.4  | 78.7  | 80.1  | 80.8  | 1910... | 85.4  | 79.3  | 78.2  | 80.3  | 1917... | 81.1  | 78.8  | 76.7  | 75.9  |
| 1904... | 86.4  | 87.3  | 84.6  | 83.9  | 1911... | 80.1  | 69.6  | 70.3  | 70.4  | 1918... | 87.1  | 78.5  | 67.4  | 68.6  |
| 1905... | 87.3  | 89.0  | 89.5  | 89.2  | 1912... | 81.5  | 80.0  | 82.1  | 82.2  | 1919... | 86.7  | 81.7  | 80.0  | 81.3  |
| 1906... | 87.5  | 88.0  | 90.2  | 90.1  | 1913... | 86.9  | 75.8  | 65.1  | 65.3  | 1920... | 84.6  | 86.7  | 86.4  | 89.1  |
| 1907... | 80.2  | 82.8  | 80.2  | 78.0  | 1914... | 85.8  | 74.8  | 71.7  | 72.9  | 1921... | 91.1  | 84.3  | 85.1  | 84.8  |

TABLE 8.—Corn: Forecast of production, monthly, with preliminary and final estimates, of crops of the United States.

[000 omitted.]

| Year.        | July.     | August.   | September. | October.  | November production estimate. | Final estimate. |
|--------------|-----------|-----------|------------|-----------|-------------------------------|-----------------|
|              | Bushels.  | Bushels.  | Bushels.   | Bushels.  | Bushels.                      | Bushels.        |
| 1912.....    | 2,811,000 | 2,811,000 | 2,995,000  | 3,016,000 | 3,169,137                     | 3,124,746       |
| 1913.....    | 2,971,000 | 2,676,000 | 2,851,000  | 2,374,100 | 2,463,017                     | 2,446,988       |
| 1914.....    | 2,916,572 | 2,634,214 | 2,598,417  | 2,676,270 | 2,705,692                     | 2,672,804       |
| 1915.....    | 2,814,180 | 2,917,954 | 2,984,995  | 3,026,189 | 3,090,509                     | 2,994,793       |
| 1916.....    | 2,865,982 | 2,777,030 | 2,709,682  | 2,717,932 | 2,648,508                     | 2,566,927       |
| 1917.....    | 3,123,772 | 3,190,792 | 3,247,512  | 3,210,795 | 3,191,083                     | 3,065,233       |
| 1918.....    | 3,159,836 | 2,989,351 | 2,671,840  | 2,717,775 | 2,749,198                     | 2,502,665       |
| 1919.....    | 2,815,430 | 2,788,378 | 2,867,692  | 2,900,511 | 2,610,250                     | 2,811,302       |
| 1920.....    | 2,778,903 | 3,003,322 | 3,131,849  | 3,216,192 | 3,199,126                     | 3,206,584       |
| Average..... | 2,917,403 | 2,864,893 | 2,838,593  | 2,872,859 | 2,902,891                     | 2,821,560       |
| 1921.....    | 3,123,139 | 3,032,170 | 3,185,876  | 3,163,063 | 3,151,698                     | 3,080,372       |

<sup>1</sup> Preliminary.

## CORN—Continued.

TABLE 9.—Corn: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.              | Yield per acre (bushels).  |      |      |      |      | Farm price per bushel (cents). |                             |      |      |      |      |      |       |       |       |      |      |                            |       |  | Value per acre (dollars). <sup>1</sup> |  |
|---------------------|----------------------------|------|------|------|------|--------------------------------|-----------------------------|------|------|------|------|------|-------|-------|-------|------|------|----------------------------|-------|--|--|--|
|                     | 5-year average, 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921                           | 10-year average, 1912-1921. | 1912 | 1913 | 1914 | 1915 | 1916 | 1917  | 1918  | 1919  | 1920 | 1921 | 5-year average, 1916-1920. | 1921  |  |  |  |
|                     |                            |      |      |      |      |                                |                             |      |      |      |      |      |       |       |       |      |      |                            |       |  |  |  |
| Maine.....          | 46.4                       | 37.0 | 45.0 | 55.0 | 45.0 | 50.0                           | 125                         | 75   | 87   | 88   | 85   | 119  | 228   | 167   | 195   | 128  | 77   | 75.11                      | 38.50 |  |  |  |
| N. Hampshire.....   | 45.9                       | 40.0 | 45.0 | 46.5 | 45.0 | 53.0                           | 119                         | 75   | 81   | 82   | 76   | 115  | 217   | 150   | 170   | 145  | 75   | 70.30                      | 39.75 |  |  |  |
| Vermont.....        | 46.3                       | 45.0 | 38.0 | 46.5 | 47.0 | 55.0                           | 119                         | 72   | 81   | 81   | 84   | 110  | 213   | 170   | 175   | 126  | 76   | 69.67                      | 41.80 |  |  |  |
| Massachusetts.....  | 47.5                       | 45.0 | 52.0 | 52.3 | 40.0 | 43.0                           | 121                         | 77   | 85   | 85   | 80   | 120  | 215   | 170   | 172   | 125  | 77   | 75.10                      | 36.96 |  |  |  |
| Rhode Island.....   | 43.4                       | 42.0 | 44.0 | 45.0 | 40.0 | 46.0                           | 142                         | 88   | 99   | 98   | 100  | 133  | 236   | 180   | 186   | 180  | 110  | 75.36                      | 50.60 |  |  |  |
| Connecticut.....    | 48.4                       | 45.0 | 50.0 | 50.0 | 40.0 | 52.0                           | 125                         | 77   | 85   | 89   | 85   | 120  | 215   | 171   | 180   | 140  | 90   | 78.12                      | 46.80 |  |  |  |
| New York.....       | 39.2                       | 31.0 | 36.0 | 43.0 | 40.0 | 46.0                           | 114                         | 70   | 81   | 83   | 78   | 110  | 198   | 175   | 166   | 116  | 67   | 55.03                      | 30.32 |  |  |  |
| New Jersey.....     | 42.8                       | 42.0 | 41.0 | 40.0 | 44.0 | 47.0                           | 100                         | 68   | 75   | 76   | 75   | 100  | 170   | 150   | 159   | 85   | 53   | 54.30                      | 24.91 |  |  |  |
| Pennsylvania.....   | 42.8                       | 39.0 | 40.0 | 47.0 | 45.0 | 48.0                           | 98                          | 63   | 72   | 73   | 70   | 97   | 153   | 155   | 147   | 100  | 55   | 54.72                      | 26.40 |  |  |  |
| Delaware.....       | 33.9                       | 34.0 | 31.0 | 30.0 | 37.5 | 37.0                           | 86                          | 51   | 59   | 62   | 62   | 89   | 140   | 136   | 145   | 75   | 45   | 38.33                      | 16.65 |  |  |  |
| Maryland.....       | 38.5                       | 39.0 | 35.0 | 41.0 | 33.5 | 39.0                           | 88                          | 55   | 65   | 68   | 61   | 89   | 140   | 135   | 140   | 81   | 49   | 45.03                      | 19.11 |  |  |  |
| Virginia.....       | 27.6                       | 27.0 | 28.0 | 28.0 | 30.0 | 25.0                           | 104                         | 71   | 76   | 81   | 71   | 93   | 153   | 160   | 169   | 100  | 69   | 37.89                      | 17.25 |  |  |  |
| West Virginia.....  | 32.6                       | 30.0 | 31.0 | 34.0 | 34.0 | 34.0                           | 111                         | 65   | 80   | 83   | 74   | 101  | 170   | 180   | 164   | 116  | 75   | 46.56                      | 25.50 |  |  |  |
| North Carolina..... | 20.4                       | 20.0 | 22.1 | 21.9 | 22.5 | 19.3                           | 117                         | 83   | 88   | 86   | 77   | 110  | 170   | 177   | 185   | 113  | 78   | 30.42                      | 15.05 |  |  |  |
| South Carolina..... | 17.5                       | 19.0 | 17.0 | 16.0 | 19.0 | 16.3                           | 125                         | 85   | 97   | 92   | 87   | 113  | 192   | 195   | 197   | 116  | 74   | 28.14                      | 12.06 |  |  |  |
| Georgia.....        | 15.1                       | 16.0 | 15.0 | 14.5 | 15.0 | 15.0                           | 108                         | 85   | 91   | 85   | 78   | 100  | 160   | 165   | 160   | 105  | 53   | 20.96                      | 7.95  |  |  |  |
| Florida.....        | 14.7                       | 15.0 | 16.0 | 15.0 | 13.5 | 14.0                           | 98                          | 79   | 82   | 80   | 73   | 90   | 140   | 139   | 140   | 106  | 53   | 18.22                      | 7.42  |  |  |  |
| Ohio.....           | 40.3                       | 38.0 | 36.0 | 43.0 | 43.4 | 41.0                           | 81                          | 45   | 63   | 61   | 56   | 90   | 136   | 130   | 121   | 68   | 41   | 41.67                      | 16.81 |  |  |  |
| Indiana.....        | 36.5                       | 36.0 | 33.0 | 37.0 | 40.5 | 36.0                           | 76                          | 42   | 60   | 58   | 51   | 84   | 125   | 119   | 125   | 69   | 37   | 38.60                      | 13.32 |  |  |  |
| Illinois.....       | 35.6                       | 38.0 | 35.5 | 36.0 | 34.6 | 34.0                           | 76                          | 41   | 63   | 61   | 54   | 84   | 110   | 120   | 130   | 59   | 38   | 35.28                      | 12.92 |  |  |  |
| Michigan.....       | 33.3                       | 32.1 | 53.0 | 37.0 | 39.0 | 39.0                           | 98                          | 57   | 67   | 67   | 68   | 95   | 182   | 180   | 138   | 82   | 48   | 37.40                      | 13.72 |  |  |  |
| Wisconsin.....      | 30.3                       | 32.0 | 40.0 | 45.0 | 43.2 | 46.2                           | 88                          | 51   | 60   | 65   | 68   | 92   | 163   | 180   | 125   | 77   | 46   | 42.15                      | 21.25 |  |  |  |
| Minnesota.....      | 37.7                       | 30.0 | 40.0 | 40.0 | 37.5 | 41.0                           | 71                          | 37   | 53   | 52   | 62   | 80   | 110   | 111   | 120   | 51   | 31   | 34.26                      | 12.71 |  |  |  |
| Iowa.....           | 40.7                       | 37.0 | 36.0 | 41.0 | 46.0 | 43.0                           | 71                          | 35   | 60   | 55   | 51   | 80   | 108   | 122   | 120   | 47   | 30   | 36.82                      | 12.90 |  |  |  |
| Missouri.....       | 28.8                       | 35.0 | 20.0 | 27.0 | 32.0 | 30.0                           | 83                          | 46   | 74   | 68   | 57   | 90   | 114   | 143   | 138   | 64   | 40   | 28.76                      | 12.00 |  |  |  |
| North Dakota.....   | 22.6                       | 9.0  | 19.0 | 33.0 | 24.0 | 28.0                           | 33                          | 43   | 52   | 58   | 67   | 84   | 151   | 130   | 140   | 72   | 34   | 24.31                      | 9.52  |  |  |  |
| South Dakota.....   | 30.5                       | 28.0 | 34.0 | 28.5 | 30.0 | 33.0                           | 69                          | 37   | 56   | 50   | 49   | 77   | 120   | 110   | 119   | 42   | 26   | 27.89                      | 8.32  |  |  |  |
| Nebraska.....       | 26.5                       | 27.0 | 17.7 | 26.2 | 33.8 | 28.0                           | 72                          | 37   | 65   | 53   | 47   | 78   | 120   | 126   | 122   | 41   | 27   | 24.23                      | 7.56  |  |  |  |
| Kansas.....         | 16.8                       | 13.0 | 7.1  | 11.5 | 22.6 | 22.2                           | 81                          | 40   | 78   | 63   | 51   | 90   | 126   | 146   | 140   | 44   | 31   | 13.75                      | 6.88  |  |  |  |
| Kentucky.....       | 27.5                       | 31.5 | 26.0 | 24.0 | 20.0 | 25.6                           | 96                          | 58   | 76   | 64   | 56   | 87   | 121   | 146   | 155   | 82   | 55   | 32.53                      | 11.08 |  |  |  |
| Tennessee.....      | 25.6                       | 29.0 | 24.0 | 21.4 | 28.0 | 25.8                           | 92                          | 61   | 77   | 68   | 58   | 94   | 120   | 145   | 157   | 87   | 52   | 30.40                      | 13.42 |  |  |  |
| Alabama.....        | 15.3                       | 16.0 | 14.6 | 14.5 | 15.7 | 15.5                           | 101                         | 79   | 89   | 80   | 69   | 102  | 125   | 148   | 159   | 98   | 62   | 18.56                      | 9.61  |  |  |  |
| Mississippi.....    | 17.3                       | 30.0 | 17.0 | 15.0 | 16.0 | 18.0                           | 99                          | 71   | 77   | 73   | 85   | 98   | 138   | 151   | 160   | 162  | 56   | 21.60                      | 10.08 |  |  |  |
| Louisiana.....      | 18.0                       | 18.0 | 16.0 | 17.5 | 19.2 | 19.5                           | 98                          | 68   | 77   | 75   | 64   | 94   | 146   | 161   | 150   | 85   | 65   | 22.87                      | 12.63 |  |  |  |
| Texas.....          | 20.4                       | 11.0 | 10.0 | 30.0 | 26.0 | 25.2                           | 98                          | 64   | 82   | 74   | 58   | 104  | 167   | 176   | 118   | 84   | 54   | 22.59                      | 13.01 |  |  |  |
| Oklahoma.....       | 18.6                       | 8.5  | 7.5  | 24.0 | 23.0 | 25.0                           | 84                          | 41   | 72   | 64   | 46   | 93   | 147   | 164   | 127   | 54   | 32   | 16.59                      | 8.00  |  |  |  |
| Arkansas.....       | 20.1                       | 24.0 | 13.6 | 18.0 | 23.4 | 22.0                           | 102                         | 67   | 78   | 80   | 64   | 98   | 140   | 180   | 164   | 97   | 57   | 25.31                      | 12.54 |  |  |  |
| Montana.....        | 12.5                       | 12.5 | 22.1 | 0.4  | 10.2 | 11.2                           | 101                         | 70   | 77   | 70   | 69   | 93   | 175   | 135   | 165   | 80   | 67   | 17.95                      | 8.53  |  |  |  |
| Wyoming.....        | 21.4                       | 20.0 | 32.0 | 16.0 | 32.0 | 22.0                           | 96                          | 64   | 80   | 70   | 67   | 98   | 175   | 140   | 165   | 56   | 50   | 25.93                      | 11.00 |  |  |  |
| Colorado.....       | 17.5                       | 20.0 | 17.5 | 15.0 | 20.5 | 14.5                           | 83                          | 50   | 73   | 60   | 55   | 90   | 125   | 135   | 142   | 70   | 31   | 19.64                      | 4.50  |  |  |  |
| New Mexico.....     | 22.1                       | 20.0 | 25.0 | 21.6 | 21.7 | 22.1                           | 114                         | 75   | 75   | 80   | 73   | 113  | 188   | 180   | 151   | 110  | 90   | 32.56                      | 19.89 |  |  |  |
| Arizona.....        | 27.0                       | 27.0 | 28.0 | 29.0 | 22.0 | 23.0                           | 146                         | 100  | 110  | 120  | 115  | 140  | 190   | 210   | 200   | 150  | 100  | 50.20                      | 20.00 |  |  |  |
| Utah.....           | 23.7                       | 25.0 | 28.0 | 19.2 | 21.9 | 24.6                           | 114                         | 75   | 70   | 75   | 80   | 115  | 170   | 181   | 150   | 150  | 76   | 38.58                      | 18.70 |  |  |  |
| Nevada.....         | 30.0                       | 30.0 | 32.0 | 28.0 | 32.0 | 28.1                           | 132                         | 98   | 118  | 110  | 93   | 125  | 150   | 210   | 140   | 160  | 120  | 43.71                      | 34.92 |  |  |  |
| Idaho.....          | 34.6                       | 31.0 | 40.0 | 32.0 | 36.0 | 34.0                           | 103                         | 70   | 68   | 72   | 65   | 100  | 155   | 183   | 165   | 100  | 50   | 49.01                      | 17.00 |  |  |  |
| Washington.....     | 37.4                       | 37.0 | 38.0 | 36.0 | 36.0 | 40.0                           | 114                         | 77   | 80   | 73   | 77   | 100  | 162   | 170   | 185   | 125  | 86   | 54.63                      | 34.40 |  |  |  |
| Oregon.....         | 39.7                       | 30.0 | 31.0 | 29.0 | 31.0 | 30.0                           | 108                         | 75   | 70   | 82   | 82   | 95   | 150   | 155   | 155   | 130  | 84   | 41.25                      | 25.20 |  |  |  |
| California.....     | 33.4                       | 32.0 | 35.0 | 32.0 | 33.0 | 35.0                           | 123                         | 85   | 88   | 87   | 88   | 124  | 185   | 193   | 193   | 179  | 77   | 52.66                      | 26.95 |  |  |  |
| United States.....  | 28.1                       | 26.8 | 24.0 | 28.9 | 31.5 | 29.7                           | 73.7                        | 48.7 | 60.1 | 64.4 | 57.5 | 88.9 | 127.9 | 136.5 | 134.5 | 67.0 | 42.3 | 29.60                      | 12.54 |  |  |  |

<sup>1</sup>Based upon farm price Dec. 1.

CORN—Continued.

TABLE 10.—Corn: Farm price, cents per bushel, on first of each month, 1908–1921.

| Year.               | January. | February. | March. | April. | May.  | June. | July. | August. | September. | October. | November. | December. | Average. <sup>1</sup> |
|---------------------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|-----------------------|
| 1908.....           | 54.0     | 56.0      | 58.1   | 61.2   | 64.7  | 72.7  | 75.7  | 78.1    | 76.5       | 72.3     | 63.5      | 60.6      | 63.4                  |
| 1909.....           | 60.7     | 61.4      | 64.7   | 67.5   | 71.9  | 76.3  | 77.0  | 75.2    | 71.0       | 67.1     | 62.2      | 57.9      | 65.9                  |
| 1910.....           | 62.3     | 65.2      | 65.9   | 65.5   | 63.5  | 65.2  | 66.2  | 67.3    | 66.3       | 61.1     | 52.6      | 49.0      | 62.1                  |
| 1911.....           | 48.2     | 49.0      | 48.9   | 49.7   | 51.8  | 55.1  | 60.0  | 65.9    | 65.9       | 65.7     | 64.7      | 61.8      | 55.3                  |
| 1912.....           | 62.2     | 64.6      | 66.6   | 71.1   | 79.4  | 82.5  | 81.1  | 79.3    | 77.6       | 70.2     | 53.4      | 43.7      | 67.6                  |
| 1913.....           | 48.9     | 50.6      | 52.2   | 53.7   | 56.9  | 60.6  | 63.2  | 65.4    | 75.4       | 75.3     | 70.7      | 69.1      | 59.4                  |
| 1914.....           | 69.6     | 68.3      | 69.1   | 70.7   | 72.1  | 75.0  | 75.5  | 76.3    | 81.5       | 78.2     | 70.6      | 64.4      | 71.4                  |
| 1915.....           | 66.2     | 72.8      | 75.1   | 75.1   | 77.7  | 77.9  | 77.7  | 78.9    | 77.3       | 70.5     | 61.9      | 57.5      | 71.2                  |
| 1916.....           | 62.1     | 66.7      | 68.2   | 70.3   | 72.3  | 74.1  | 75.4  | 79.4    | 83.6       | 82.3     | 85.0      | 88.9      | 73.8                  |
| 1917.....           | 90.0     | 95.8      | 100.9  | 113.4  | 150.6 | 160.1 | 164.6 | 196.6   | 175.5      | 175.1    | 146.0     | 127.9     | 129.2                 |
| 1918.....           | 134.8    | 138.8     | 154.3  | 153.6  | 155.7 | 152.5 | 153.7 | 159.7   | 165.7      | 159.5    | 140.3     | 136.5     | 147.3                 |
| 1919.....           | 144.7    | 138.1     | 137.2  | 149.6  | 162.6 | 171.2 | 176.5 | 191.2   | 185.4      | 153.9    | 133.4     | 134.5     | 151.5                 |
| 1920.....           | 140.4    | 146.8     | 148.5  | 158.6  | 169.6 | 185.2 | 185.0 | 163.7   | 155.7      | 121.3    | 87.3      | 67.0      | 140.4                 |
| 1921.....           | 66.7     | 62.4      | 64.5   | 63.0   | 59.5  | 62.5  | 62.2  | 61.7    | 56.2       | 51.0     | 41.1      | 42.3      | 53.6                  |
| Average 1912–1921.. | 88.5     | 90.5      | 93.7   | 97.9   | 105.6 | 110.2 | 111.6 | 115.3   | 113.4      | 103.7    | 89.5      | 83.7      | 97.0                  |

<sup>1</sup> Weighted average.

TABLE 11.—Corn: Monthly marketings by farmers, 1916–1921.

| Month.         | Estimated amount sold monthly by farmers of United States (millions of bushels). |         |         |         |         |             | Per cent of year's sales. |         |         |         |         |             |
|----------------|--|---------|---------|---------|---------|-------------|---------------------------|---------|---------|---------|---------|-------------|
|                | 1916–17  | 1917–18 | 1918–19 | 1919–20 | 1920–21 | 5-yr. aver. | 1916–17                   | 1917–18 | 1918–19 | 1919–20 | 1920–21 | 5-yr. aver. |
| July.....      | 30   | 34      | 27      | 20      | 35      | 29          | 6.2                       | 5.3     | 6.7     | 4.5     | 5.4     | 5.6         |
| August.....    | 34   | 26      | 28      | 25      | 36      | 30          | 7.1                       | 4.0     | 6.8     | 5.6     | 5.6     | 5.8         |
| September..... | 28   | 22      | 35      | 21      | 45      | 30          | 5.9                       | 3.4     | 8.4     | 4.9     | 6.9     | 5.9         |
| October.....   | 25   | 24      | 27      | 25      | 35      | 27          | 5.3                       | 3.8     | 6.7     | 5.6     | 5.3     | 5.3         |
| November.....  | 67   | 56      | 30      | 40      | 46      | 43          | 14.0                      | 8.8     | 7.3     | 9.2     | 7.1     | 9.3         |
| December.....  | 60   | 78      | 49      | 66      | 74      | 65          | 12.5                      | 12.2    | 12.1    | 15.0    | 11.3    | 12.6        |
| January.....   | 73   | 91      | 61      | 57      | 93      | 75          | 15.1                      | 14.2    | 15.0    | 12.9    | 14.3    | 14.3        |
| February.....  | 43   | 103     | 30      | 42      | 76      | 59          | 9.0                       | 16.1    | 7.2     | 9.5     | 11.7    | 16.7        |
| March.....     | 34   | 88      | 31      | 38      | 58      | 50          | 7.0                       | 13.7    | 7.5     | 8.7     | 8.9     | 9.2         |
| April.....     | 26   | 45      | 34      | 26      | 36      | 33          | 5.4                       | 7.1     | 8.2     | 5.9     | 5.6     | 6.4         |
| May.....       | 31   | 36      | 33      | 33      | 55      | 38          | 6.5                       | 5.6     | 8.0     | 7.6     | 8.5     | 7.3         |
| June.....      | 20   | 37      | 25      | 47      | 61      | 40          | 6.0                       | 5.8     | 6.1     | 10.6    | 9.4     | 7.6         |
| Season....     | 480  | 640     | 410     | 440     | 650     | 524         | 100.0                     | 100.0   | 100.0   | 100.0   | 100.0   | 100.0       |

## CORN—Continued.

TABLE 12.—*Corn: Extent and causes of yearly crop losses, 1909-1920.*

| Year.        | Deficient<br>moisture. | Excessive<br>moisture. | Floods. | Frost or<br>freeze. | Hail. | Hot winds. | Storms. | Total cli-<br>matic. | Plant dis-<br>ease. | Insect pests. | Animal<br>pests. | Defective<br>seed. | Total. |
|--------------|------------------------|------------------------|---------|---------------------|-------|------------|---------|----------------------|---------------------|---------------|------------------|--------------------|--------|
|              | P.ct.                  | P.ct.                  | P.ct.   | P.ct.               | P.ct. | P.ct.      | P.ct.   | P.ct.                | P.ct.               | P.ct.         | P.ct.            | P.ct.              | P.ct.  |
| 1920.....    | 5.4                    | 3.3                    | 0.6     | 0.7                 | 0.5   | 0.5        | 0.4     | 11.2                 | 0.3                 | 3.6           | 0.1              | 0.3                | 15.9   |
| 1919.....    | 10.8                   | 7.3                    | 1.4     | .1                  | .3    | 1.0        | .4      | 21.4                 | .4                  | 3.1           | .1               | .2                 | 25.4   |
| 1918.....    | 22.1                   | .9                     | .5      | 2.0                 | .4    | 6.3        | .3      | 32.8                 | .3                  | 2.6           | .1               | 1.5                | 37.7   |
| 1917.....    | 12.1                   | 2.9                    | .6      | 13.5                | .6    | 1.2        | .3      | 31.6                 | .3                  | 1.4           | .1               | .2                 | 33.8   |
| 1916.....    | 18.5                   | 5.8                    | 1.7     | 1.7                 | .4    | 1.7        | 1.1     | 31.3                 | .3                  | 2.0           | .1               | .6                 | 34.7   |
| 1915.....    | 3.0                    | 11.9                   | 2.1     | 6.9                 | .6    | .3         | 1.1     | 26.5                 | .3                  | 2.1           | .1               | .2                 | 29.9   |
| 1914.....    | 20.8                   | 1.3                    | .4      | .4                  | .5    | 2.1        | .4      | 26.1                 | .1                  | 3.6           | .1               | .3                 | 30.6   |
| 1913.....    | 27.1                   | 1.2                    | .4      | 1.0                 | .3    | 3.1        | .4      | 33.7                 | .1                  | 3.7           | .2               | .4                 | 33.9   |
| 1912.....    | 8.7                    | 4.6                    | .9      | 1.7                 | .5    | 1.0        | .3      | 18.1                 | .3                  | 4.8           | .3               | 2.3                | 26.3   |
| 1911.....    | 23.4                   | 1.6                    | (1)     | .4                  | .2    | 3.4        | .1      | 29.6                 | .2                  | 2.3           | .2               | 1.4                | 33.7   |
| 1910.....    | 13.9                   | 3.0                    | .8      | .9                  | .4    | 1.6        | .6      | 21.3                 | .2                  | 2.3           | .4               | 1.2                | 26.0   |
| 1909.....    | 13.0                   | 7.3                    | 1.5     | 1.0                 | .5    | 1.6        | .7      | 25.8                 | .2                  | 2.3           | .4               | .3                 | 29.6   |
| Average..... | 14.9                   | 4.3                    | .9      | 2.5                 | .4    | 2.0        | .5      | 25.8                 | .2                  | 2.8           | .2               | .6                 | 30.2   |

<sup>1</sup> Less than 0.05 per cent.TABLE 13.—*Corn: Monthly and yearly average price per bushel of reported sales, No. 3 yellow, 1900-01 to 1921-22.*CHICAGO.<sup>1</sup>

| Crop year.       | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | August. | September. | October. | Weighted<br>average. |
|------------------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|---------|------------|----------|----------------------|
| 1900-1901.....   | \$0.37    | \$0.35    | \$0.36   | \$0.37    | \$0.39 | \$0.42 | \$0.43 | \$0.42 | \$0.48 | \$0.56  | \$0.56     | \$0.56   | \$0.43               |
| 1901-2.....      | .60       | .64       | .62      | .59       | .59    | .62    | .62    | .63    | .65    | .60     | .59        | .60      | .62                  |
| 1902-3.....      | .53       | .46       | .43      | .43       | .41    | .41    | .46    | .49    | .51    | .53     | .51        | .45      | .47                  |
| 1903-4.....      | .44       | .44       | .43      | .46       | .46    | .49    | .50    | .49    | .49    | .52     | .53        | .55      | .49                  |
| 1904-5.....      | .48       | .43       | .42      | .44       | .47    | .48    | .50    | .55    | .57    | .54     | .53        | .53      | .48                  |
| 1905-6.....      | .45       | .42       | .42      | .42       | .40    | .42    | .47    | .49    | .52    | .54     | .47        | .46      | .44                  |
| 1906-7.....      | .43       | .42       | .41      | .43       | .44    | .44    | .52    | .53    | .54    | .57     | .64        | .65      | .50                  |
| 1907-8.....      | .59       | .58       | .53      | .54       | .63    | .65    | .73    | .72    | .76    | .81     | .80        | .77      | .68                  |
| 1908-9.....      | .63       | .59       | .64      | .65       | .66    | .69    | .73    | .75    | .72    | .70     | .69        | .59      | .65                  |
| 1909-10.....     | .59       | .59       | .64      | .63       | .61    | .57    | .60    | .59    | .62    | .64     | .58        | .50      | .59                  |
| 1910-11.....     | .49       | .45       | .45      | .45       | .45    | .50    | .54    | .55    | .63    | .65     | .67        | .73      | .53                  |
| 1911-12.....     | .68       | .61       | .62      | .64       | .68    | .78    | .79    | .75    | .68    | .79     | .74        | .65      | .71                  |
| 1912-13.....     | .52       | .46       | .46      | .48       | .49    | .55    | .57    | .60    | .62    | .74     | .75        | .70      | .53                  |
| 1913-14.....     | .72       | .66       | .62      | .62       | .64    | .67    | .70    | .72    | .71    | .82     | .79        | .73      | .70                  |
| 1914-15.....     | .67       | .64       | .71      | .74       | .72    | .75    | .77    | .74    | .78    | .81     | .74        | .65      | .70                  |
| 1915-16.....     | .63       | .69       | .74      | .74       | .73    | .76    | .75    | .74    | .81    | .85     | .86        | .96      | .79                  |
| 1916-17.....     | .98       | .92       | .98      | 1.00      | 1.09   | 1.40   | 1.59   | 1.70   | 1.99   | 2.06    | 2.10       | 2.03     | 1.11                 |
| 1917-18.....     | 2.21      | 1.77      | 1.81     | 1.70      | 1.65   | 1.60   | 1.62   | 1.70   | 1.72   | 1.68    | 1.41       | 1.63     |                      |
| 1918-19.....     | 1.33      | 1.45      | 1.43     | 1.27      | 1.53   | 1.62   | 1.74   | 1.78   | 1.92   | 1.95    | 1.55       | 1.41     | 1.62                 |
| 1919-20.....     | 1.46      | 1.47      | 1.51     | 1.46      | 1.58   | 1.69   | 2.02   | 1.89   | 1.58   | 1.58    | 1.31       | .91      | 1.59                 |
| 1920-21.....     | .77       | .74       | .65      | .63       | .62    | .57    | .60    | .63    | .60    | .56     | .53        | .45      | .62                  |
| 1921-22.....     | .47       | .47       |          |           |        |        |        |        |        |         |            |          |                      |
| 21-year average. | .74       | .70       | .70      | .70       | .72    | .76    | .82    | .82    | .85    | .88     | .83        | .77      | .75                  |

<sup>1</sup> Compiled from Chicago Daily Trade Bulletin.

# Statistics of Corn.

515.

## CORN—Continued.

TABLE 13.—*Corn: Monthly and yearly average price per bushel of reported sales, No. 3 yellow, 1900-01 to 1921-22—Continued.*

### KANSAS CITY.<sup>1</sup>

| Crop year.       | November | December. | January. | February. | March. | April. | May.   | June.  | July.  | August. | September. | October. | Weighted average. |
|------------------|----------|-----------|----------|-----------|--------|--------|--------|--------|--------|---------|------------|----------|-------------------|
| 1910-11.....     | \$0.47   | \$0.43    | \$0.44   | \$0.42    | \$0.44 | \$0.47 | \$0.52 | \$0.55 | \$0.67 | \$0.62  | \$0.66     | \$0.71   | \$0.49            |
| 1911-12.....     | .67      | .62       | .68      | .65       | .71    | .81    | .80    | .75    | .75    | .76     | .71        | .64      | .69               |
| 1912-13.....     | .45      | .45       | .47      | .47       | .50    | .56    | .58    | .59    | .62    | .75     | .75        | .72      | .55               |
| 1913-14.....     | .72      | .66       | .65      | .63       | .66    | .69    | .73    | .71    | .70    | .81     | .78        | .70      | .67               |
| 1914-15.....     | .64      | .65       | .63      | .73       | .71    | .75    | .75    | .74    | .76    | .76     | .70        | .59      | .72               |
| 1915-16.....     | .62      | .67       | .70      | .71       | .68    | .72    | .72    | .72    | .78    | .82     | .84        | .91      | .69               |
| 1916-17.....     | .95      | .89       | .95      | .99       | 1.16   | 1.41   | 1.53   | 1.68   | 2.01   | 1.73    | 1.96       | 1.91     | 1.06              |
| 1917-18.....     | 2.02     | 1.06      | 1.65     | 1.74      | 1.06   | 1.59   | 1.61   | 1.54   | 1.63   | 1.76    | 1.66       | 1.45     | 1.63              |
| 1918-19.....     | 1.47     | 1.52      | 1.42     | 1.34      | 1.48   | 1.66   | 1.74   | 1.79   | 1.92   | 1.93    | 1.64       | 1.42     | 1.56              |
| 1919-20.....     | 1.51     | 1.51      | 1.49     | 1.45      | 1.56   | 1.71   | 1.91   | 1.82   | 1.58   | 1.57    | 1.28       | .88      | 1.60              |
| 1920-21.....     | .87      | .69       | .60      | .58       | .57    | .52    | .55    | .56    | .51    | .46     | .49        | .88      | .59               |
| 1921-22.....     | .43      | .42       |          |           |        |        |        |        |        |         |            |          |                   |
| 11-year average. | .92      | .89       | .89      | .88       | .92    | .99    | 1.04   | 1.04   | 1.08   | 1.09    | 1.04       | .94      | .93               |

### OMAHA.<sup>2</sup>

|              |        |        |        |        |        |        |        |        |        |        |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1917-18..... | \$1.88 | \$1.58 | \$1.61 | \$1.67 | \$1.63 | \$1.36 | \$1.60 | \$1.53 | \$1.60 | \$1.73 | \$1.61 | \$1.41 | \$1.53 |
| 1918-19..... | 1.42   | 1.45   | 1.45   | 1.31   | 1.48   | 1.62   | 1.68   | 1.72   | 1.88   | 1.85   | 1.50   | 1.38   | 1.57   |
| 1919-20..... | 1.43   | 1.44   | 1.49   | 1.29   | 1.53   | 1.65   | 1.86   | 1.77   | 1.51   | 1.50   | 1.19   | .84    | 1.61   |
| 1920-21..... | .69    | .64    | .57    | .54    | .53    | .48    | .52    | .51    | .50    | .46    | .42    | .37    | .54    |
| 1921-22..... | .40    | .39    |        |        |        |        |        |        |        |        |        |        |        |

### ST. LOUIS.<sup>4</sup>

|                  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1909-10.....     | \$0.58 | \$0.61 | \$0.65 | \$0.63 | \$0.60 | \$0.58 | \$0.62 | \$0.59 | \$0.63 | \$0.62 | \$0.55 | \$0.49 | \$0.61 |
| 1910-11.....     | .47    | .44    | .45    | .44    | .45    | .45    | .53    | .55    | .65    | .63    | .66    | .72    | .43    |
| 1911-12.....     | .65    | .61    | .60    | .64    | .70    | .50    | .79    | .74    | .74    | .76    | .72    | .64    | .70    |
| 1912-13.....     | .48    | .46    | .48    | .43    | .50    | .57    | .58    | .60    | .64    | .73    | .73    | .71    | .62    |
| 1913-14.....     | .73    | .67    | .63    | .62    | .66    | .65    | .71    | .71    | .73    | .83    | .79    | .72    | .68    |
| 1914-15.....     | .66    | .65    | .72    | .74    | .72    | .76    | .77    | .74    | .78    | .78    | .74    | .64    | .72    |
| 1915-16.....     | .64    | .68    | .75    | .75    | .73    | .75    | .74    | .74    | .81    | .80    | .86    | .93    | .75    |
| 1916-17.....     | .96    | .91    | .98    | .99    | 1.12   | 1.45   | 1.63   | 1.67   | 1.94   | 1.75   | 2.04   | 1.91   | 1.11   |
| 1917-18.....     | 2.00   | 1.75   | 1.76   | 1.62   | 1.68   | 1.62   | 1.60   | 1.69   | 1.75   | 1.63   | 1.45   | 1.67   | 1.67   |
| 1918-19.....     | 1.40   | 1.50   | 1.44   | 1.33   | 1.54   | 1.62   | 1.74   | 1.78   | 1.99   | 1.93   | 1.52   | 1.42   | 1.59   |
| 1919-20.....     | 1.49   | 1.49   | 1.51   | 1.48   | 1.60   | 1.73   | 2.00   | 1.87   | 1.62   | 1.57   | 1.30   | .92    | 1.64   |
| 1920-21.....     | .79    | .74    | .64    | .63    | .62    | .57    | .62    | .61    | .50    | .54    | .52    | .46    | .60    |
| 1921-22.....     | .47    | .48    |        |        |        |        |        |        |        |        |        |        |        |
| 12-year average. | .90    | .88    | .88    | .88    | .91    | .97    | 1.03   | 1.02   | 1.07   | 1.06   | 1.00   | .92    | .92    |

### MINNEAPOLIS.<sup>5</sup>

|                  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1909-10.....     | \$0.60 | \$0.60 | \$0.61 | \$0.59 | \$0.57 | \$0.54 | \$0.57 | \$0.54 | \$0.60 | \$0.60 | \$0.54 | \$0.49 | \$0.56 |
| 1910-11.....     | .49    | .48    | .44    | .43    | .43    | .45    | .52    | .53    | .64    | .62    | .64    | .70    | .60    |
| 1911-12.....     | .69    | .55    | .62    | .64    | .68    | .76    | .76    | .72    | .74    | .74    | .72    | .66    | .70    |
| 1912-13.....     | .50    | .42    | .43    | .44    | .47    | .53    | .59    | .57    | .59    | .78    | .71    | .66    | .63    |
| 1913-14.....     | .65    | .61    | .58    | .57    | .60    | .64    | .68    | .67    | .70    | .77    | .76    | .67    | .62    |
| 1914-15.....     | .61    | .60    | .63    | .72    | .69    | .71    | .72    | .69    | .77    | .79    | .74    | .66    | .67    |
| 1915-16.....     | .68    | .75    | .77    | .77    | .74    | .76    | .76    | .74    | .82    | .85    | .84    | .93    | .79    |
| 1916-17.....     | .91    | .87    | .95    | 1.00   | 1.07   | 1.34   | 1.53   | 1.64   | 1.93   | 1.96   | 2.15   | 1.80   | 1.06   |
| 1917-18.....     | 2.10   | 1.69   | 1.73   | 1.85   | 1.76   | 1.80   | 1.61   | 1.54   | 4.82   | 1.75   | 1.61   | 1.37   | 1.63   |
| 1918-19.....     | 1.39   | 1.46   | 1.45   | 1.24   | 1.44   | 1.65   | 1.69   | 1.68   | 1.86   | 1.88   | 1.63   | 1.37   | 1.57   |
| 1919-20.....     | 1.48   | 1.49   | 1.45   | 1.43   | 1.57   | 1.66   | 1.98   | 1.73   | 1.52   | 1.43   | 1.26   | .90    | 1.62   |
| 1920-21.....     | .76    | .69    | .69    | .54    | .55    | .51    | .53    | .54    | .49    | .53    | .49    | .38    | .59    |
| 1921-22.....     | .42    | .40    |        |        |        |        |        |        |        |        |        |        |        |
| 12-year average. | .89    | .85    | .86    | .85    | .88    | .93    | 1.00   | .97    | 1.02   | 1.06   | 1.00   | .88    | .90    |

<sup>1</sup> Compiled from Kansas City Daily Price Current and Grain Market Review.

<sup>2</sup> Compiled from Omaha Daily Price Current.

<sup>4</sup> Compiled from St. Louis Daily Market Reporter.

<sup>5</sup> Compiled from the Minneapolis Daily Market Record.



## CORN—Continued.

TABLE 14.—*Corn: Monthly and yearly receipts and shipments, 11 primary markets, 1910-11 to 1921-22.<sup>1</sup>*

[In thousands of bushels; 1 c., 100 omitted.]

| Crop year.           | Chicago.  |            | Milwaukee. |            | Minneapolis. |            | Duluth.   |            | St. Louis. |            | Toledo.   |            | Detroit.  |            | Kansas City. |            | Peoria.   |            | Omaha.    |            | Indianapolis. |            | Total.    |            |
|----------------------|-----------|------------|------------|------------|--------------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|--------------|------------|-----------|------------|-----------|------------|---------------|------------|-----------|------------|
|                      | Receipts. | Shipments. | Receipts.  | Shipments. | Receipts.    | Shipments. | Receipts. | Shipments. | Receipts.  | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts.    | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts.     | Shipments. | Receipts. | Shipments. |
| 1910-11.....         | 113,808   | 92,682     | 7,885      | 7,025      | 8,948        | 5,376      | 1,097     | 1,097      | 1,097      | 28,783     | 15,422    | 6,236      | 3,880     | 1,930      | 16,026       | 13,395     | 16,477    | 11,141     | (*)       | (*)        | (*)           | (*)        | 108,713   | 152,522    |
| 1911-12.....         | 108,431   | 78,940     | 9,410      | 6,806      | 5,423        | 3,264      | 19        | 19         | 12,225     | 17,115     | 492       | 4,121      | 2,857     | 1,888      | 19,444       | 14,971     | 19,641    | 15,202     | 20,817    | 15,404     | 13,687        | 1,947      | 228,621   | 149,753    |
| 1912-13.....         | 131,792   | 94,311     | 11,613     | 7,887      | 6,288        | 4,374      | 492       | 492        | 492        | 22,762     | 267       | 2,686      | 2,767     | 1,615      | 16,920       | 10,614     | 17,923    | 11,202     | 22,618    | 17,732     | 15,974        | 3,637      | 283,177   | 166,006    |
| 1913-14.....         | 84,838    | 87,528     | 15,804     | 10,727     | 10,710       | 8,776      | 578       | 578        | 369        | 16,901     | 119       | 4,560      | 2,314     | 1,686      | 27,494       | 19,192     | 14,728    | 6,651      | 97,108    | 63,040     | 14,118        | 6,188      | 280,029   | 156,528    |
| 1914-15.....         | 116,848   | 80,250     | 10,600     | 16,985     | 14,699       | 11,997     | 3,056     | 3,056      | 3,056      | 18,628     | 206       | 4,582      | 4,058     | 3,021      | 16,396       | 11,9       | 16,738    | 6,821      | 24,598    | 23,117     | 15,087        | 6,498      | 283,776   | 176,455    |
| 1915-16.....         | 101,225   | 62,148     | 9,887      | 9,423      | 5,661        | 3,927      | (*)       | (*)        | 17,674     | 8,678      | 4,656     | 1,422      | 4,726     | 3,130      | 25,837       | 22,459     | 35,948    | 13,722     | 21,498    | 15,948     | 790           | 11,078     | 290,300   | 149,459    |
| 1916-17.....         | 78,728    | 40,497     | 12,758     | 8,681      | 9,550        | 7,779      | 32        | 32         | 6,211      | 12,191     | 1,882     | 1,100      | 8,102     | 2,428      | 12,748       | 8,460      | 31,483    | 11,870     | 20,820    | 25,179     | 24,421        | 14,801     | 226,963   | 124,088    |
| 1917-18.....         | 98,786    | 84,540     | 12,374     | 7,006      | 16,715       | 9,636      | 177       | 177        | 170        | 25,354     | 130       | 2,609      | 4,361     | 717        | 31,366       | 24,481     | 36,176    | 17,002     | 46,159    | 30,355     | 20,583        | 9,206      | 291,660   | 156,463    |
| 1918-19.....         | 61,806    | 32,019     | 4,784      | 3,697      | 6,621        | 4,773      | 6         | 6          | (*)        | 10,210     | 11,956    | 1,127      | 519       | 625        | 16,146       | 10,345     | 18,511    | 10,530     | 21,805    | 21,197     | 15,905        | 7,130      | 169,123   | 102,822    |
| 1919-20.....         | 87,641    | 37,260     | 14,653     | 7,079      | 9,182        | 6,364      | 5         | 5          | (*)        | 27,666     | 15,975    | 2,122      | 1,671     | 481        | 11,518       | 8,043      | 22,449    | 17,690     | 23,604    | 19,991     | 7,170         | 219,763    | 116,921   |            |
| 1920-21.....         | 167,241   | 113,374    | 27,452     | 15,821     | 15,066       | 8,483      | 4,834     | 4,834      | 3,777      | 25,924     | 17,044    | 3,194      | 1,663     | 261        | 14,137       | 9,742      | 16,091    | 9,823      | 20,012    | 17,356     | 17,506        | 6,553      | 310,122   | 209,385    |
| 11-year average..... | 104,573   | 65,313     | 13,476     | 9,540      | 9,622        | 6,797      | 1,117     | 1,117      | 1,194      | 22,061     | 13,318    | 3,553      | 1,735     | 1,613      | 18,000       | 13,692     | 22,238    | 11,899     | 26,768    | 22,393     | 18,006        | 7,300      | 239,477   | 151,764    |

| Month.         | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. |
|----------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| 1920.          |           |            |           |            |           |            |           |            |           |            |           |            |           |            |
| November.....  | 3, 901    | 5, 072     | 834       | 423        | 891       | 357        | 3         | .....      | 881       | 623        | 192       | 66         | 151       | 12         |
| December.....  | 6, 223    | 3, 376     | 2, 034    | 627        | 2, 027    | 1, 238     | 3         | .....      | 1, 453    | 518        | 382       | 54         | 189       | 26         |
| 1921.          |           |            |           |            |           |            |           |            |           |            |           |            |           |            |
| January.....   | 21, 606   | 7, 020     | 2, 783    | 1, 856     | 2, 128    | 1, 406     | 44        | .....      | 3, 928    | 2, 258     | 427       | 161        | 213       | 42         |
| February.....  | 13, 657   | 5, 176     | 1, 782    | 1, 575     | 1, 090    | 884        | 260       | 13         | 2, 667    | 1, 613     | 150       | 123        | 82        | 40         |
| March.....     | 15, 743   | 10, 716    | 3, 074    | 1, 896     | 1, 328    | 1, 102     | 662       | 11         | 3, 272    | 2, 365     | 307       | 98         | 165       | 33         |
| April.....     | 4, 893    | 6, 469     | 689       | 1, 689     | 441       | 552        | 202       | 706        | 1, 356    | 1, 168     | 205       | 50         | 90        | 16         |
| May.....       | 9, 466    | 9, 223     | 838       | 620        | 510       | 401        | 280       | 588        | 2, 346    | 1, 279     | 232       | 124        | 102       | 19         |
| June.....      | 21, 322   | 11, 760    | 3, 014    | 1, 994     | 1, 130    | 824        | 476       | 405        | 1, 916    | 1, 666     | 382       | 289        | 111       | 35         |
| July.....      | 8, 954    | 11, 077    | 2, 065    | 2, 222     | 302       | 483        | 401       | 694        | 1, 659    | 1, 267     | 149       | 189        | 55        | 8          |
| August.....    | 16, 810   | 13, 295    | 3, 820    | 2, 558     | 522       | 322        | 233       | 94         | 2, 396    | 1, 845     | 230       | 56         | 116       | 6          |
| September..... | 23, 406   | 17, 238    | 3, 540    | 4, 463     | 803       | 389        | 1, 070    | 817        | 1, 785    | 979        | 344       | 54         | 221       | 14         |
| October.....   | 21, 200   | 12, 943    | 2, 981    | 1, 930     | 839       | 405        | 1, 214    | 619        | 2, 357    | 1, 434     | 194       | 55         | 108       | 20         |
| November.....  | 17, 577   | 5, 987     | 765       | 1, 593     | 766       | 384        | 419       | 840        | 1, 818    | 1, 511     | 277       | 4          | 126       | 45         |
| December.....  | 17, 542   | 5, 981     | 3, 469    | 1, 384     | 1, 816    | 1, 143     | 1, 376    | 234        | 3, 413    | 1, 538     | 441       | 156        | 270       | 41         |

No report.

Bulletin and Board of Trade Reports.

## CORN—Continued.

TABLE 15.—*Corn: Visible supply in United States, first of each month, 1910-11 to 1921-22.<sup>1</sup>*

[In thousands of bushels; i. e., 000 omitted.]

| Crop year.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910-11..... | 3,510  | 1,545  | 5,099  | 9,145  | 11,794 | 11,166 | 7,047  | 4,635  | 7,432  | 7,100  | 6,724  | 6,339  |
| 1911-12..... | 1,703  | 2,054  | 5,140  | 6,900  | 14,257 | 15,914 | 7,490  | 5,699  | 8,204  | 2,451  | 1,823  | 3,101  |
| 1912-13..... | 2,639  | 1,525  | 5,879  | 9,717  | 17,918 | 21,494 | 7,270  | 2,549  | 11,479 | 6,389  | 2,612  | 7,308  |
| 1913-14..... | 6,206  | 2,028  | 12,126 | 16,505 | 18,374 | 18,812 | 9,330  | 4,409  | 7,589  | 3,203  | 3,923  | 5,461  |
| 1914-15..... | 3,114  | 3,382  | 19,708 | 34,156 | 41,238 | 32,877 | 20,203 | 12,795 | 5,225  | 2,306  | 2,382  | 3,444  |
| 1915-16..... | 3,288  | 4,387  | 8,919  | 14,773 | 24,605 | 27,697 | 21,004 | 14,505 | 6,870  | 5,167  | 3,330  | 5,933  |
| 1916-17..... | 2,361  | 2,677  | 5,838  | 10,671 | 12,931 | 11,974 | 7,173  | 2,629  | 3,277  | 2,841  | 2,371  | 1,163  |
| 1917-18..... | 1,277  | 1,932  | 3,155  | 4,623  | 8,939  | 19,016 | 16,111 | 13,038 | 11,487 | 9,466  | 5,232  | 5,503  |
| 1918-19..... | 4,733  | 2,216  | 2,415  | 5,549  | 4,433  | 2,514  | 4,245  | 2,600  | 4,038  | 2,461  | 956    | 2,163  |
| 1919-20..... | 1,484  | 1,477  | 2,921  | 3,675  | 4,951  | 5,669  | 5,035  | 2,740  | 4,384  | 6,152  | 2,564  | 7,537  |
| 1920-21..... | 10,065 | 4,597  | 5,409  | 14,297 | 22,333 | 32,896 | 23,018 | 15,103 | 24,304 | 14,584 | 11,500 | 11,765 |
| 1921-22..... | 18,935 | 15,518 | .....  | .....  | .....  | .....  | .....  | .....  | .....  | .....  | .....  | .....  |

<sup>1</sup> Compiled from Chicago Daily Trade Bulletin.TABLE 16.—*Corn: Summary in per cent of carloads graded by licensed inspectors for yearly periods, all inspection points. Total of all classes and subclasses under each grade.*

1917-18 TO 1920-21.

| Crop year.   | Receipts. |        |        |        |        |        |        | Shipments. |        |        |        |        |        |        |
|--------------|-----------|--------|--------|--------|--------|--------|--------|------------|--------|--------|--------|--------|--------|--------|
|              | No. 1.    | No. 2. | No. 3. | No. 4. | No. 5. | No. 6. | S. G.  | No. 1.     | No. 2. | No. 3. | No. 4. | No. 5. | No. 6. | S. G.  |
|              | P. ct.    | P. ct. | P. ct. | P. ct. | P. ct. | P. ct. | P. ct. | P. ct.     | P. ct. | P. ct. | P. ct. | P. ct. | P. ct. | P. ct. |
| 1917-18..... | 0.7       | 5.9    | 13.5   | 17.3   | 13.8   | 13.5   | 30.3   | 0.3        | 7.2    | 34.3   | 19.8   | 8.1    | 10.1   | 20.2   |
| 1918-19..... | 6.5       | 17.9   | 21.0   | 21.4   | 14.8   | 8.3    | 10.1   | 2.2        | 27.6   | 37.6   | 15.0   | 5.3    | 5.3    | 7.0    |
| 1919-20..... | 12.9      | 21.7   | 17.5   | 25.6   | 12.3   | 4.0    | 6.0    | 5.8        | 38.5   | 30.1   | 15.1   | 4.9    | 2.3    | 3.3    |
| 1920-21..... | 21.2      | 27.4   | 19.8   | 19.5   | 6.5    | 2.9    | 2.7    | 14.2       | 57.9   | 20.4   | 4.4    | 0.7    | 1.1    | 1.3    |

NOVEMBER, 1920, TO OCTOBER, 1921.

|             |      |      |      |      |     |     |     |      |      |      |     |     |     |     |
|-------------|------|------|------|------|-----|-----|-----|------|------|------|-----|-----|-----|-----|
| White.....  | 24.3 | 33.2 | 20.0 | 14.3 | 3.9 | 2.1 | 2.2 | 10.9 | 68.6 | 15.0 | 3.8 | 0.4 | 0.8 | 0.5 |
| Yellow..... | 25.2 | 25.3 | 18.1 | 21.3 | 7.3 | 2.8 | 2.0 | 21.7 | 50.2 | 20.4 | 5.5 | 0.7 | 0.8 | 0.7 |
| Mixed.....  | 12.1 | 27.0 | 23.2 | 19.7 | 6.9 | 3.8 | 4.3 | 8.4  | 61.7 | 22.0 | 3.7 | 0.9 | 1.3 | 2.0 |

## CORN—Continued.

TABLE 17.—Corn (including meal): International trade, calendar years 1909–1920.<sup>1</sup>[The item *maizena* or *maizena* is included as "Corn and corn meal."]

GENERAL NOTE.—Substantially the international trade of the world. It should not be expected that the world export and import totals for any year will agree. Among sources of disagreement are these: (1) Different periods of time covered in the "year" of the various countries; (2) imports received in year subsequent to year of export; (3) want of uniformity in classification of goods among countries; (4) different practices and varying degrees of failure in recording countries of origin and ultimate destination; (5) different practices of recording reexported goods; (6) opposite methods of treating free ports; (7) clerical errors, which, it may be assumed, are not infrequent.

The exports given are domestic exports, and the imports given are imports for consumption as far as it is feasible and consistent so to express the facts. While there are some inevitable omissions, on the other hand there are some duplications because of reshipments that do not appear as such in official reports. For the United Kingdom, import figures refer to imports for consumption, when available; otherwise total imports, less exports, of "foreign and colonial merchandise." Figures for the United States include Alaska, Porto Rico, and Hawaii.

| country.                                    | Average, 1909–1913.       |                           | 1918                      |                           | 1919                      |                           | 1920                      |                           |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|   | Imports.                  | Exports.                  | Imports.                  | Exports.                  | Imports.                  | Exports.                  | Imports.                  | Exports.                  |
| <b>PRINCIPAL EXPORT-<br/>ING COUNTRIES.</b> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| Argentina.....                              | 2                         | 115,749                   | ( <sup>2</sup> )          | 28,171                    | 1                         | 97,851                    | —                         | —                         |
| British South Africa.....                   | 257                       | 4,115                     | 56                        | 13,507                    | 184                       | 13,582                    | 637                       | 5,149                     |
| Bulgaria.....                               | 44                        | 9,307                     | —                         | —                         | —                         | —                         | —                         | 4,185                     |
| Rumania.....                                | 176                       | 38,966                    | —                         | —                         | 596                       | 26                        | —                         | 16,943                    |
| Russia.....                                 | 335                       | 30,034                    | —                         | —                         | —                         | —                         | —                         | —                         |
| United States.....                          | 1,226                     | 45,054                    | 1,990                     | 47,059                    | 11,213                    | 16,002                    | 7,784                     | 21,230                    |
| Uruguay.....                                | 5                         | 201                       | 178                       | 6                         | —                         | 10                        | —                         | ( <sup>1</sup> )          |
| <b>PRINCIPAL IMPORT-<br/>ING COUNTRIES.</b> |                           |                           |                           |                           |                           |                           |                           |                           |
| Austria-Hungary.....                        | 13,877                    | 268                       | —                         | —                         | —                         | —                         | —                         | 38                        |
| Belgium.....                                | 25,801                    | 3,130                     | —                         | —                         | 1,483                     | 675                       | 4,882                     | 2,327                     |
| Canada.....                                 | 10,629                    | 25                        | 11,757                    | 48                        | 6,459                     | 229                       | 10,793                    | 113                       |
| Cuba.....                                   | 2,746                     | ( <sup>2</sup> )          | 1,672                     | —                         | 2,308                     | —                         | —                         | —                         |
| Denmark.....                                | 11,440                    | 6                         | 105                       | —                         | 7,781                     | 1                         | 9,822                     | 4                         |
| Egypt.....                                  | 471                       | 61                        | 5                         | 48                        | 8                         | 3                         | 950                       | ( <sup>2</sup> )          |
| France.....                                 | 18,708                    | 82                        | 6,812                     | 12                        | 6,921                     | 61                        | 17,609                    | 858                       |
| Germany.....                                | 32,160                    | 1                         | —                         | —                         | —                         | —                         | 16,099                    | ( <sup>2</sup> )          |
| Italy.....                                  | 14,895                    | 206                       | 10,856                    | ( <sup>2</sup> )          | 8,232                     | ( <sup>2</sup> )          | 12,599                    | 4                         |
| Mexico.....                                 | 4,404                     | 82                        | 3,039                     | —                         | —                         | —                         | —                         | —                         |
| Netherlands.....                            | 29,580                    | 8,750                     | 346                       | —                         | 9,635                     | 38                        | 15,566                    | 37                        |
| Norway.....                                 | 1,079                     | —                         | 2,531                     | —                         | 2,814                     | —                         | 2,574                     | —                         |
| Portugal.....                               | 1,674                     | 5                         | 533                       | ( <sup>2</sup> )          | 1,610                     | ( <sup>2</sup> )          | —                         | —                         |
| Spain.....                                  | 9,775                     | 44                        | 383                       | 68                        | 2,509                     | 483                       | 7,719                     | 188                       |
| Sweden.....                                 | 1,476                     | 26                        | 1,374                     | —                         | 3,190                     | 15                        | 1,519                     | —                         |
| Switzerland.....                            | 3,987                     | 1                         | 652                       | —                         | 5,274                     | —                         | 963                       | ( <sup>2</sup> )          |
| United Kingdom.....                         | 82,976                    | 96                        | 32,275                    | 3                         | 38,986                    | 17                        | 71,087                    | 67                        |
| Other countries.....                        | 3,268                     | 9,817                     | 1,027                     | 5,198                     | 871                       | 3,080                     | 2,305                     | 5,319                     |
| <b>Total.....</b>                           | <b>270,901</b>            | <b>271,026</b>            | <b>75,591</b>             | <b>92,120</b>             | <b>110,084</b>            | <b>132,073</b>            | <b>182,878</b>            | <b>56,462</b>             |

<sup>1</sup> Does not include statistics of trade for Austria-Hungary, Belgium, and Germany during the war period, 1914–1918. Therefore the total trade statistics of imports and exports for all countries are not strictly comparable during that period.

<sup>2</sup> Less than 500.

<sup>3</sup> Austria only, new boundaries.

## WHEAT.

TABLE 18.—Wheat: Area and production in undermentioned countries, 1909–1921.

| Country.                          | Area.                               |                         |                         |                         | Production.                         |                           |                           |                           |
|-----------------------------------|-------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------------------|---------------------------|---------------------------|---------------------------|
|                                   | Average,<br>1909–1913. <sup>1</sup> | 1919                    | 1920                    | 1921                    | Average,<br>1909–1913. <sup>1</sup> | 1919                      | 1920                      | 1921                      |
| <b>NORTH AMERICA.</b>             | <i>1,000<br/>acres.</i>             | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>bushels.</i>           | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| United States.....                | 47,097                              | 75,694                  | 61,143                  | 62,403                  | 967,979                             | 963,279                   | 833,027                   | 794,893                   |
| Canada:                           |                                     |                         |                         |                         |                                     |                           |                           |                           |
| Quebec.....                       | 70                                  | 251                     | 222                     | 181                     | 1,168                               | 4,206                     | 3,775                     | 2,784                     |
| Ontario.....                      | 850                                 | 981                     | 1,030                   | 774                     | 13,633                              | 20,693                    | 22,973                    | 15,575                    |
| Manitoba.....                     | 2,861                               | 2,880                   | 2,706                   | 3,501                   | 53,174                              | 40,975                    | 37,542                    | 39,084                    |
| Saskatchewan.....                 | 4,894                               | 10,587                  | 10,061                  | 13,557                  | 97,954                              | 89,994                    | 113,135                   | 133,000                   |
| Alberta.....                      | 1,201                               | 4,253                   | 4,074                   | 5,123                   | 24,733                              | 84,575                    | 83,461                    | 53,044                    |
| Other.....                        | 69                                  | 144                     | 139                     | 125                     | 1,407                               | 2,312                     | 2,303                     | 2,430                     |
| Total Canada.....                 | 9,945                               | 19,126                  | 18,232                  | 23,261                  | 197,119                             | 198,260                   | 263,189                   | 300,857                   |
| Mexico.....                       | 2,623                               | .....                   | .....                   | .....                   | 9,995                               | <sup>2</sup> 14,239       | <sup>2</sup> 14,951       | .....                     |
| Total North America.....          | 59,670                              | .....                   | .....                   | .....                   | 893,805                             | 1,175,478                 | 1,111,167                 | .....                     |
| <b>SOUTH AMERICA.</b>             |                                     |                         |                         |                         |                                     |                           |                           |                           |
| Argentina.....                    | 15,799                              | 16,976                  | 14,958                  | 14,816                  | 157,347                             | 171,591                   | 214,143                   | 169,756                   |
| Chile.....                        | 1,021                               | 1,313                   | .....                   | 1,152                   | 20,316                              | 21,591                    | 21,591                    | 25,180                    |
| Uruguay.....                      | 734                                 | 840                     | 681                     | 700                     | 7,314                               | 6,890                     | 8,948                     | 7,768                     |
| Total South America.....          | 17,554                              | 19,129                  | .....                   | 16,668                  | 184,977                             | 200,072                   | 241,682                   | 202,704                   |
| <b>EUROPE.</b>                    |                                     |                         |                         |                         |                                     |                           |                           |                           |
| Austria.....                      | <sup>3</sup> 3,011                  | 371                     | 371                     | 378                     | <sup>3</sup> 61,075                 | 5,114                     | 5,424                     | 6,452                     |
| Belgium.....                      | 395                                 | 343                     | 306                     | 353                     | 14,583                              | 9,895                     | 10,275                    | 11,523                    |
| Bulgaria.....                     | <sup>2</sup> 2,764                  | 2,080                   | 2,131                   | 2,361                   | <sup>3</sup> 43,725                 | 34,028                    | 39,705                    | 42,510                    |
| Czechoslovakia.....               | .....                               | <sup>4</sup> 942        | 1,666                   | 1,538                   | .....                               | <sup>5</sup> 15,969       | 26,862                    | 40,673                    |
| Denmark.....                      | 123                                 | 128                     | 180                     | 230                     | 4,918                               | 8,523                     | 6,945                     | .....                     |
| Finland.....                      | .....                               | 19                      | 19                      | 20                      | .....                               | 806                       | 872                       | 280                       |
| France.....                       | <sup>1</sup> 16,308                 | 11,633                  | 12,566                  | 13,170                  | <sup>3</sup> 317,254                | 187,004                   | 236,520                   | <sup>2</sup> 227,787      |
| Germany.....                      | <sup>1</sup> 4,763                  | <sup>3</sup> 209        | 3,413                   | 3,562                   | <sup>1</sup> 152,119                | 79,703                    | 82,835                    | 97,664                    |
| Greece.....                       | <sup>3</sup> 868                    | 936                     | 1,369                   | 983                     | <sup>4</sup> 7,300                  | 8,693                     | 12,194                    | 11,170                    |
| Hungary.....                      | <sup>3</sup> 8,284                  | 2,662                   | 2,662                   | 2,697                   | <sup>1</sup> 156,523                | .....                     | 38,394                    | 47,037                    |
| Italy.....                        | 11,746                              | 10,563                  | 11,290                  | 11,789                  | 183,260                             | 169,769                   | 141,337                   | 138,126                   |
| Luxemburg.....                    | 27                                  | 26                      | 27                      | 27                      | 615                                 | .....                     | 449                       | 661                       |
| Netherlands.....                  | 138                                 | 163                     | 152                     | 179                     | 4,979                               | 6,015                     | 5,766                     | 8,686                     |
| Norway.....                       | 12                                  | 41                      | 46                      | 40                      | 307                                 | 1,071                     | 999                       | 941                       |
| Poland.....                       | <sup>1</sup> 1,260                  | <sup>1</sup> 1,064      | 1,791                   | 2,082                   | <sup>3</sup> 23,343                 | <sup>2</sup> 22,156       | 22,741                    | 35,576                    |
| Portugal.....                     | 1,180                               | 999                     | .....                   | .....                   | 8,683                               | .....                     | 7,140                     | .....                     |
| Russia proper.....                | <sup>1</sup> 50,368                 | .....                   | .....                   | .....                   | <sup>2</sup> 522,794                | .....                     | .....                     | .....                     |
| Rumania.....                      | <sup>2</sup> 4,576                  | <sup>2</sup> 4,271      | 5,007                   | 5,904                   | <sup>3</sup> 86,679                 | <sup>3</sup> 66,080       | 70,350                    | 76,977                    |
| Serbia.....                       | <sup>3</sup> 874                    | .....                   | .....                   | .....                   | <sup>3</sup> 14,775                 | .....                     | .....                     | .....                     |
| Spain.....                        | 9,547                               | 10,378                  | 10,255                  | 10,350                  | 130,446                             | 129,250                   | 138,606                   | 143,205                   |
| Sweden.....                       | 255                                 | 343                     | 360                     | 360                     | 7,907                               | 9,500                     | 10,545                    | 12,566                    |
| Switzerland.....                  | 156                                 | 130                     | 119                     | 117                     | 3,314                               | 3,524                     | 3,584                     | 3,574                     |
| United Kingdom:                   |                                     |                         |                         |                         |                                     |                           |                           |                           |
| England.....                      | 1,743                               | 2,150                   | 1,824                   | 1,937                   | 56,411                              | 61,824                    | 52,120                    | 63,688                    |
| Wales.....                        | 44                                  | 71                      | 51                      | 39                      | 1,117                               | 1,984                     | 1,232                     | 1,096                     |
| Scotland.....                     | 52                                  | 80                      | 54                      | 45                      | 2,345                               | 3,064                     | 2,080                     | 2,598                     |
| Ireland.....                      | 43                                  | 70                      | 50                      | 46                      | 1,608                               | 2,452                     | 1,402                     | <sup>1</sup> 1,448        |
| Total United Kingdom.....         | 1,887                               | 2,371                   | 1,979                   | 2,084                   | 61,481                              | 69,324                    | 56,334                    | 73,800                    |
| Yugoslavia.....                   | .....                               | 3,380                   | 3,061                   | .....                   | .....                               | 50,956                    | 64,710                    | .....                     |
| Total Europe.....                 | 118,567                             | .....                   | .....                   | .....                   | 1,806,104                           | .....                     | .....                     | .....                     |
| <b>ASIA.</b>                      |                                     |                         |                         |                         |                                     |                           |                           |                           |
| British India <sup>10</sup> ..... | 29,114                              | 23,798                  | 29,949                  | 25,722                  | 350,736                             | 230,485                   | 377,888                   | 250,469                   |
| Cyprus.....                       | .....                               | .....                   | .....                   | .....                   | 2,296                               | <sup>1</sup> 1,861        | <sup>2</sup> 3,000        | .....                     |

<sup>1</sup> Five-year average, except in a few cases where five-year statistics were unavailable.<sup>2</sup> Unofficial.<sup>3</sup> Old boundaries.<sup>4</sup> Bohemia and Moravia only.<sup>5</sup> Bohemia, Moravia, and Silesia.<sup>6</sup> 1914.<sup>7</sup> Former Russian Poland, Eastern and Western Galicia and Posen.<sup>8</sup> Former Kingdom, Bessarabia, and Bukovina.<sup>9</sup> Excludes Transylvania.<sup>10</sup> Includes some native states.

WHEAT—Continued.

TABLE 18.—Wheat: Area and production in undermentioned countries, 1909-1921.—Con.

| Country.                   | Area.                  |                 |                 |                 | Production.            |                   |                   |                   |
|----------------------------|------------------------|-----------------|-----------------|-----------------|------------------------|-------------------|-------------------|-------------------|
|                            | Average,<br>1909-1913. | 1919            | 1920            | 1921            | Average,<br>1909-1913. | 1919              | 1920              | 1921              |
| <b>ASIA—continued.</b>     |                        |                 |                 |                 |                        |                   |                   |                   |
| Japanese Empire:           | 1,000<br>acres.        | 1,000<br>acres. | 1,000<br>acres. | 1,000<br>acres. | 1,000<br>bushels.      | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. |
| Japan.....                 | 1,179                  | 1,344           | 1,300           | .....           | 25,274                 | 32,562            | 28,288            | 27,874            |
| Formosa.....               | 14                     | .....           | .....           | .....           | 173                    | .....             | .....             | .....             |
| Chosen.....                | 369                    | .....           | .....           | .....           | 4,871                  | 7,144             | .....             | .....             |
| Persia.....                | .....                  | .....           | .....           | .....           | 16,000                 | .....             | .....             | .....             |
| Russia (Asiatic).....      | 9,764                  | .....           | .....           | .....           | 84,139                 | .....             | .....             | .....             |
| Turkey (Asiatic).....      | .....                  | .....           | .....           | .....           | 35,000                 | .....             | .....             | .....             |
| Total Asia.....            | 40,440                 | .....           | .....           | .....           | 518,479                | .....             | .....             | .....             |
| <b>AFRICA.</b>             |                        |                 |                 |                 |                        |                   |                   |                   |
| Algeria.....               | 3,371                  | 2,800           | 2,648           | 2,816           | 33,071                 | 25,559            | 8,561             | 41,480            |
| Egypt.....                 | 1,811                  | 1,824           | 1,190           | 1,458           | 34,000                 | 30,137            | 31,711            | 37,011            |
| Morocco, French.....       | .....                  | 1,551           | 1,997           | 1,468           | .....                  | 16,391            | 21,999            | 17,406            |
| Tunis.....                 | 1,193                  | 1,408           | 1,343           | 1,500           | 6,063                  | 7,849             | 5,225             | 8,818             |
| Union of South Africa..... | .....                  | 95              | 800             | 823             | 4,620                  | 8,338             | 5,488             | 8,113             |
| Total Africa.....          | 5,875                  | 8,036           | 7,978           | 8,065           | 77,754                 | 87,774            | 72,984            | 112,888           |
| <b>AUSTRALASIA.</b>        |                        |                 |                 |                 |                        |                   |                   |                   |
| <b>Australia:</b>          |                        |                 |                 |                 |                        |                   |                   |                   |
| Queensland.....            | 95                     | 22              | 46              | 178             | 1,250                  | 104               | 312               | 4,174             |
| New South Wales.....       | 2,025                  | 2,410           | 1,474           | 3,124           | 26,717                 | 18,325            | 4,388             | 53,716            |
| Victoria.....              | 2,105                  | 2,214           | 1,918           | 2,296           | 27,656                 | 25,240            | 14,858            | 39,469            |
| South Australia.....       | 1,993                  | 2,186           | 1,927           | 2,164           | 22,843                 | 22,937            | 14,980            | 34,237            |
| Western Australia.....     | 544                    | 1,145           | 1,042           | 1,255           | 5,671                  | 8,845             | 11,223            | 12,177            |
| Tasmania.....              | 36                     | 12              | 12              | 22              | 806                    | 187               | 214               | 418               |
| Other.....                 | .....                  | 1               | .....           | .....           | .....                  | .....             | 1                 | .....             |
| Total Australia.....       | 6,798                  | 7,990           | 6,419           | 9,037           | 84,943                 | 75,638            | 45,976            | 144,191           |
| New Zealand.....           | 238                    | 208             | 140             | 220             | 7,885                  | 6,568             | 4,560             | 6,872             |
| Total Australasia.....     | 7,036                  | 8,198           | 6,559           | 9,257           | 92,828                 | 82,206            | 50,536            | 151,063           |
| Grand total.....           | 249,162                | .....           | .....           | .....           | 3,573,947              | .....             | .....             | .....             |

TABLE 19.—Wheat: World production so far as reported, 1891-1921.

| Year.     | Production.     | Year.     | Production.     | Year.     | Production.     | Year.     | Production.     |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |
| 1891..... | 2,432,323,000   | 1899..... | 2,783,885,000   | 1907..... | 3,133,965,000   | 1915..... | 4,198,782,000   |
| 1892..... | 2,481,805,000   | 1900..... | 2,610,751,000   | 1908..... | 3,182,105,000   | 1916..... | 2,608,545,000   |
| 1893..... | 2,559,174,000   | 1901..... | 2,955,975,000   | 1909..... | 3,581,519,000   | 1917..... | 2,287,889,000   |
| 1894..... | 2,680,557,000   | 1902..... | 3,090,116,000   | 1910..... | 3,575,055,000   | 1918..... | 2,803,616,000   |
| 1895..... | 2,593,812,000   | 1903..... | 3,189,813,000   | 1911..... | 3,551,795,000   | 1919..... | 2,742,339,000   |
| 1896..... | 2,506,320,000   | 1904..... | 3,163,542,000   | 1912..... | 3,791,951,000   | 1920..... | 2,867,864,000   |
| 1897..... | 2,236,268,000   | 1905..... | 3,327,084,000   | 1913..... | 4,127,437,000   | 1921..... | 2,965,186,000   |
| 1898..... | 2,918,305,000   | 1906..... | 3,434,354,000   | 1914..... | 3,585,916,000   |           |                 |

## WHEAT—Continued.

TABLE 20.—Wheat: Average yield per acre in undermentioned countries, 1890–1921.

| Year.          | United States. | Russia (European). | Germany. | Austria. | Hungary Proper.   | France.           | United Kingdom.   |
|----------------|----------------|--------------------|----------|----------|-------------------|-------------------|-------------------|
| Average:       | Bushels.       | Bushels.           | Bushels. | Bushels. | Bushels.          | Bushels.          | Bushels.          |
| 1890–1899..... | 13.2           | 8.9                | 24.5     | 16.2     | .....             | <sup>1</sup> 18.6 | <sup>1</sup> 31.2 |
| 1900–1909..... | 14.1           | 9.7                | 28.9     | 18.0     | .....             | <sup>1</sup> 20.5 | <sup>1</sup> 33.1 |
| 1910–1919..... | 14.8           | <sup>2</sup> 10.5  | 28.8     | 17.7     | <sup>3</sup> 18.6 | 17.9              | 31.9              |
| 1919.....      | 12.8           | .....              | 24.8     | 13.8     | .....             | 16.1              | 29.2              |
| 1920.....      | 13.6           | .....              | 24.3     | 14.6     | 14.4              | 18.8              | 28.7              |
| 1921.....      | 12.7           | .....              | 27.5     | 17.1     | 17.5              | 24.5              | 35.4              |

<sup>1</sup> Winchester bushels.<sup>2</sup> 7-year average.<sup>3</sup> 6-year average.

TABLE 21.—Wheat: Acreage, production, value, exports, etc., in the United States, 1849–1921.

[See headnote of Table 4.]

| Year.                   | Acreage harvested (000 omitted). | Average yield per acre. | Production (000 omitted). | Average farm price per bushel Dec. 1. | Farm value Dec. 1 (000 omitted). | Chicago cash price per bushel, No. 1 northern spring. |       |                |       | Domestic exports, including flour, fiscal year beginning July 1. | Imports, including flour, fiscal year beginning July 1. | Per cent of crop exported. |
|-------------------------|----------------------------------|-------------------------|---------------------------|---------------------------------------|----------------------------------|---|-------|----------------|-------|--|---|----------------------------|
|                         |                                  |                         |                           |                                       |                                  | December  |       | Following May. |       |  |   |                            |
|                         |                                  |                         |                           |                                       |                                  | Low.  | High. | Low.           | High. |  |   |                            |
|                         | Acres.                           | Bush.                   | Bushels.                  | Cents.                                | Dollars.                         | Cts.  | Cts.  | Cts.           | Cts.  | Bushels.   | Bushels.  | P. ct.                     |
| 1849.....               |                                  |                         | 100,480                   |                                       |                                  |   |       |                |       | 7,535,901  |   | 7.5                        |
| 1859.....               |                                  |                         | 178,106                   |                                       |                                  |   |       |                |       | 17,213,133   | 1,568,791   | 9.9                        |
| 1866-1875.....          | 20,470                           | 12.0                    | 244,672                   | 105.3                                 | 257,587                          | 95  | 105   | 110            | 125   | 50,534,641   | 1,749,128   | 20.7                       |
| 1876-1885.....          | 34,433                           | 12.3                    | 424,708                   | 92.0                                  | 390,738                          | 97  | 104   | 101            | 114   | 127,468,781  | 1,711,806   | 30.0                       |
| 1886-1895.....          | 37,500                           | 12.7                    | 476,788                   | 67.3                                  | 321,071                          | 74  | 80    | 75             | 86    | 143,076,110  | 992,754   | 30.0                       |
| 1896.....               | 43,916                           | 12.4                    | 544,193                   | 71.7                                  | 390,340                          | 74  | 93    | 68             | 97    | 145,124,972  | 1,544,242   | 33.9                       |
| 1897.....               | 46,046                           | 13.3                    | 610,254                   | 80.9                                  | 493,683                          | 92  | 109   | 117            | 185   | 217,306,005  | 2,058,933   | 41.0                       |
| 1898.....               | 51,007                           | 15.1                    | 772,163                   | 58.2                                  | 449,022                          | 62  | 70    | 68             | 79    | 222,618,420  | 1,875,173   | 33.0                       |
| 1899.....               | 52,589                           | 12.1                    | 636,051                   | 58.6                                  | 372,982                          | 64  | 69    | 63             | 67    | 196,096,762  | 320,194   | 34.0                       |
| 1900.....               | 51,387                           | 11.7                    | 602,708                   | 62.0                                  | 373,578                          | 69  | 74    | 70             | 73    | 215,990,073  | 603,107   | 41.4                       |
| 1901.....               | 52,473                           | 15.0                    | 789,538                   | 62.6                                  | 494,090                          | 73  | 79    | 72             | 70    | 234,772,510  | 120,502   | 31.4                       |
| 1902.....               | 49,649                           | 14.6                    | 724,528                   | 63.0                                  | 450,530                          | 71  | 77    | 74             | 80    | 202,905,598  | 1,080,123   | 30.3                       |
| 1903.....               | 51,682                           | 12.9                    | 664,643                   | 69.5                                  | 461,005                          | 77  | 87    | 87             | 101   | 120,727,613  | 217,682   | 18.9                       |
| 1904.....               | 47,825                           | 12.5                    | 590,375                   | 92.4                                  | 551,128                          | 115   | 122   | 89             | 113   | 44,112,910   | 3,286,189   | 8.0                        |
| 1905.....               | 49,389                           | 14.7                    | 726,384                   | 74.6                                  | 542,119                          | 82  | 90    | 80             | 87    | 97,609,007   | 261,908   | 14.1                       |
| 1906.....               | 47,800                           | 15.8                    | 757,195                   | 66.2                                  | 501,355                          | .....   | ..... | 84             | 100   | 140,700,425  | 590,092   | 20.0                       |
| 1907.....               | 45,116                           | 14.1                    | 637,981                   | 86.5                                  | 552,074                          | .....   | ..... | .....          | ..... | 103,043,069  | 519,785   | 25.7                       |
| 1908.....               | 45,970                           | 14.0                    | 644,566                   | 92.2                                  | 594,092                          | 106   | 112   | 120            | 137   | 114,268,468  | 456,940   | 17.2                       |
| 1909.....               | 44,862                           | 15.8                    | 700,434                   | 98.4                                  | 689,108                          | 106   | 119   | 100            | 119   | 87,364,318   | 815,617   | 12.8                       |
| 1910 <sup>1</sup> ..... | 55,681                           | 13.9                    | 635,121                   | 88.3                                  | 561,051                          | 104   | 110   | 98             | 106   | 69,311,700   | 1,146,558   | 10.9                       |
| 1911.....               | 49,543                           | 12.5                    | 621,338                   | 87.4                                  | 543,063                          | 105   | 110   | 115            | 122   | 79,689,404   | 3,413,626   | 12.8                       |
| 1912.....               | 45,814                           | 15.9                    | 730,267                   | 76.0                                  | 555,280                          | 85  | 90    | 90             | 96    | 142,879,560  | 1,282,039   | 19.6                       |
| 1913.....               | 50,184                           | 15.2                    | 763,860                   | 79.9                                  | 618,122                          | 89  | 93    | 96             | 100   | 145,580,349  | 2,593,537   | 19.1                       |
| 1914.....               | 53,541                           | 16.0                    | 891,017                   | 98.6                                  | 878,680                          | 115   | 131   | 141            | 164   | 332,404,975  | 716,369   | 37.3                       |
| 1915.....               | 60,469                           | 17.0                    | 1,025,801                 | 91.9                                  | 942,308                          | 106   | 128   | 116            | 126   | 243,117,026  | 7,187,650   | 23.7                       |
| 1916.....               | 52,316                           | 12.2                    | 636,318                   | 150.3                                 | 1,019,968                        | 155   | 190   | 258            | 340   | 203,573,928  | 24,824,985  | 32.0                       |
| 1917.....               | 45,089                           | 14.1                    | 636,655                   | 200.8                                 | 1,278,112                        | 220   | 220   | 220            | 220   | 132,578,683  | 31,215,213  | 20.8                       |
| 1918.....               | 59,181                           | 15.6                    | 921,438                   | 204.2                                 | 1,881,826                        | 220   | 220   | 245            | 280   | 287,401,579  | 11,288,591  | 31.2                       |
| 1919 <sup>1</sup> ..... | 75,694                           | 12.8                    | 967,979                   | 214.9                                 | 2,080,056                        | 280   | 325   | 295            | 345   | 219,864,548  | 5,498,510   | 22.7                       |
| 1920.....               | 61,143                           | 13.6                    | 836,027                   | 143.7                                 | 1,197,263                        | 164   | 187   | 142            | 178   | 306,092,190  | 57,398,002  | 43.9                       |
| 1921 <sup>2</sup> ..... | 62,406                           | 12.7                    | 794,898                   | 92.7                                  | 737,068                          | 113   | 118   | .....          | ..... | .....  | .....   | .....                      |

<sup>1</sup> Acreage adjusted to census basis.<sup>2</sup> Preliminary estimate.

WHEAT—Continued.

TABLE 22.—Wheat: Acreage, production, and total farm value, by States, 1919–1921.

| State.              | Thousands of acres. |        |                   | Production (thousands of bushels). |         |                   | Total value, basis Dec. 1 price (thousands of dollars). |           |                   |
|---------------------|---------------------|--------|-------------------|------------------------------------|---------|-------------------|---|-----------|-------------------|
|                     | 1919                | 1920   | 1921 <sup>1</sup> | 1919                               | 1920    | 1921 <sup>1</sup> | 1919  | 1920      | 1921 <sup>1</sup> |
| Maine.....          | 14                  | 13     | 11                | 263                                | 286     | 187               | 579   | 658       | 327               |
| Vermont.....        | 11                  | 11     | 9                 | 176                                | 209     | 126               | 400   | 418       | 158               |
| New York.....       | 464                 | 467    | 455               | 9,753                              | 10,203  | 8,747             | 20,969  | 17,856    | 9,447             |
| New Jersey.....     | 85                  | 74     | 81                | 1,530                              | 1,184   | 1,539             | 3,366   | 2,427     | 1,739             |
| Pennsylvania.....   | 1,425               | 1,368  | 1,365             | 24,898                             | 22,700  | 23,850            | 53,779  | 38,590    | 24,566            |
| Delaware.....       | 126                 | 116    | 113               | 1,512                              | 1,972   | 1,800             | 3,221   | 3,372     | 1,274             |
| Maryland.....       | 664                 | 598    | 568               | 8,964                              | 10,166  | 7,952             | 19,273  | 16,774    | 8,191             |
| Virginia.....       | 991                 | 892    | 847               | 11,694                             | 11,150  | 8,301             | 20,195  | 20,070    | 9,629             |
| West Virginia.....  | 298                 | 253    | 250               | 4,023                              | 3,162   | 3,125             | 8,851   | 6,008     | 3,656             |
| North Carolina..... | 705                 | 680    | 600               | 5,570                              | 7,956   | 4,500             | 12,978  | 16,708    | 6,480             |
| South Carolina..... | 125                 | 107    | 118               | 1,250                              | 1,177   | 1,298             | 3,225   | 3,001     | 2,700             |
| Georgia.....        | 141                 | 124    | 138               | 1,480                              | 1,240   | 1,449             | 3,892   | 2,876     | 2,536             |
| Ohio.....           | 2,922               | 2,395  | 2,314             | 53,196                             | 30,430  | 28,697            | 123,375   | 50,209    | 30,993            |
| Indiana.....        | 2,799               | 2,080  | 2,016             | 41,751                             | 24,960  | 24,192            | 87,677  | 41,683    | 25,644            |
| Illinois.....       | 4,108               | 2,990  | 2,811             | 70,170                             | 45,402  | 45,234            | 147,357   | 73,242    | 45,234            |
| Michigan.....       | 1,056               | 1,008  | 897               | 20,445                             | 15,383  | 14,072            | 42,934  | 25,844    | 14,634            |
| Wisconsin.....      | 561                 | 341    | 214               | 7,568                              | 5,152   | 2,812             | 16,271  | 7,934     | 2,727             |
| Minnesota.....      | 3,793               | 2,880  | 2,582             | 35,731                             | 28,168  | 24,943            | 89,328  | 36,618    | 24,194            |
| Iowa.....           | 1,435               | 618    | 579               | 21,245                             | 10,732  | 10,102            | 42,490  | 15,624    | 8,890             |
| Missouri.....       | 4,565               | 3,012  | 3,161             | 61,568                             | 37,653  | 34,462            | 128,677   | 60,246    | 34,117            |
| North Dakota.....   | 9,098               | 8,916  | 8,827             | 62,776                             | 80,244  | 73,264            | 151,290   | 104,317   | 62,274            |
| South Dakota.....   | 3,806               | 2,930  | 2,845             | 31,793                             | 26,920  | 25,930            | 70,303  | 30,658    | 22,603            |
| Nebraska.....       | 4,394               | 3,593  | 3,997             | 60,675                             | 60,480  | 59,875            | 122,564   | 70,229    | 49,096            |
| Kansas.....         | 11,624              | 9,294  | 10,554            | 160,276                            | 143,078 | 128,695           | 344,594   | 186,002   | 119,687           |
| Kentucky.....       | 840                 | 588    | 634               | 9,660                              | 5,998   | 6,340             | 20,383  | 11,456    | 7,291             |
| Tennessee.....      | 685                 | 424    | 450               | 6,370                              | 4,028   | 4,500             | 14,141  | 7,855     | 5,400             |
| Alabama.....        | 34                  | 20     | 20                | 306                                | 192     | 210               | 750   | 442       | 321               |
| Mississippi.....    | 36                  | 10     | 6                 | 504                                | 100     | 84                | 1,260   | 213       | 109               |
| Texas.....          | 2,435               | 1,583  | 2,081             | 40,178                             | 20,579  | 20,810            | 80,356  | 35,396    | 20,810            |
| Oklahoma.....       | 4,718               | 3,380  | 3,786             | 66,052                             | 54,080  | 47,325            | 135,407   | 73,008    | 40,700            |
| Arkansas.....       | 256                 | 128    | 103               | 2,432                              | 1,197   | 958               | 4,913   | 2,274     | 958               |
| Montana.....        | 3,621               | 2,787  | 2,297             | 9,889                              | 28,690  | 28,168            | 23,239  | 36,724    | 23,943            |
| Wyoming.....        | 181                 | 196    | 199               | 2,613                              | 3,920   | 3,424             | 5,540   | 5,292     | 2,705             |
| Colorado.....       | 1,329               | 1,405  | 1,719             | 18,196                             | 25,273  | 23,239            | 36,755  | 34,118    | 17,602            |
| New Mexico.....     | 141                 | 195    | 227               | 2,676                              | 3,596   | 3,088             | 5,352   | 4,993     | 3,242             |
| Arizona.....        | 38                  | 36     | 40                | 950                                | 894     | 840               | 2,138   | 2,204     | 1,050             |
| Utah.....           | 269                 | 273    | 276               | 4,130                              | 5,331   | 6,299             | 8,672   | 8,150     | 4,725             |
| Nevada.....         | 22                  | 19     | 21                | 466                                | 424     | 493               | 907   | 763       | 641               |
| Idaho.....          | 1,142               | 1,100  | 1,123             | 20,775                             | 24,600  | 27,079            | 42,589  | 30,750    | 19,497            |
| Washington.....     | 2,495               | 2,480  | 2,480             | 41,888                             | 41,605  | 54,662            | 89,640  | 56,248    | 47,009            |
| Oregon.....         | 1,080               | 1,073  | 1,067             | 20,739                             | 22,427  | 24,317            | 43,060  | 29,155    | 20,669            |
| California.....     | 1,087               | 714    | 557               | 18,848                             | 9,406   | 8,355             | 34,370  | 17,993    | 8,940             |
| United States...    | 75,694              | 61,143 | 62,408            | 967,979                            | 833,027 | 794,893           | 2,080,086   | 1,197,263 | 737,068           |

<sup>1</sup> Preliminary estimate.



## WHEAT—Continued.

TABLE 23.—Winter and spring wheat: Acreage (sown and harvested), production, and farm value Dec. 1, by States in 1921 (preliminary) and United States totals, 1890-1921.

[000 omitted, under acreage, production, and value.]

| State.         | Winter wheat.                   |                    |                         |                 |                            |                          | Spring wheat. |                         |                 |                            |                          |
|----------------|---------------------------------|--------------------|-------------------------|-----------------|----------------------------|--------------------------|---------------|-------------------------|-----------------|----------------------------|--------------------------|
|                | Acreage sown in preceding fall. | Acreage harvested. | Average yield per acre. | Production.     | Average farm price Dec. 1. | Total farm value Dec. 1. | Acreage.      | Average yield per acre. | Production.     | Average farm value Dec. 1. | Total farm value Dec. 1. |
|                | <i>Acres.</i>                   | <i>Acres.</i>      | <i>Bush.</i>            | <i>Bushels.</i> | <i>Cents.</i>              | <i>Dollars.</i>          | <i>Acres.</i> | <i>Bush.</i>            | <i>Bushels.</i> | <i>Cents.</i>              | <i>Dollars.</i>          |
| Maine.....     |                                 |                    |                         |                 |                            |                          | 11            | 17.0                    | 187             | 175                        | 327                      |
| Vt.....        |                                 |                    |                         |                 |                            |                          | 9             | 14.0                    | 126             | 125                        | 158                      |
| N. Y.....      | 439                             | 430                | 19.5                    | 8,385           | 108                        | 9,056                    | 25            | 14.5                    | 362             | 108                        | 391                      |
| N. J.....      | 82                              | 81                 | 19.0                    | 1,589           | 113                        | 1,739                    |               |                         |                 |                            |                          |
| Pa.....        | 1,364                           | 1,850              | 17.5                    | 23,625          | 103                        | 24,334                   | 15            | 15.0                    | 225             | 103                        | 232                      |
| Del.....       | 116                             | 113                | 11.5                    | 1,300           | 98                         | 1,274                    |               |                         |                 |                            |                          |
| Md.....        | 580                             | 568                | 14.0                    | 7,952           | 103                        | 8,191                    |               |                         |                 |                            |                          |
| Va.....        | 366                             | 347                | 9.8                     | 8,301           | 116                        | 9,629                    |               |                         |                 |                            |                          |
| W. Va.....     | 254                             | 250                | 12.5                    | 3,125           | 117                        | 3,656                    |               |                         |                 |                            |                          |
| N. C.....      | 612                             | 600                | 7.5                     | 4,500           | 144                        | 6,480                    |               |                         |                 |                            |                          |
| S. C.....      | 121                             | 118                | 11.0                    | 1,298           | 208                        | 2,700                    |               |                         |                 |                            |                          |
| Ga.....        | 143                             | 138                | 10.5                    | 1,449           | 175                        | 2,536                    |               |                         |                 |                            |                          |
| Ohio.....      | 2,327                           | 2,290              | 12.4                    | 28,272          | 108                        | 30,534                   | 34            | 12.5                    | 425             | 108                        | 459                      |
| Ind.....       | 2,074                           | 2,012              | 12.0                    | 24,144          | 106                        | 25,593                   | 4             | 12.0                    | 48              | 106                        | 81                       |
| Ill.....       | 2,694                           | 2,632              | 15.2                    | 42,638          | 100                        | 42,638                   | 179           | 14.5                    | 2,596           | 100                        | 2,596                    |
| Mich.....      | 879                             | 857                | 16.0                    | 13,712          | 104                        | 14,260                   | 40            | 9.0                     | 360             | 104                        | 374                      |
| Wis.....       | 99                              | 89                 | 16.0                    | 1,424           | 97                         | 1,381                    | 125           | 11.1                    | 1,388           | 97                         | 1,346                    |
| Minn.....      | 99                              | 92                 | 14.0                    | 1,283           | 97                         | 1,249                    | 2,490         | 9.5                     | 23,655          | 97                         | 22,945                   |
| Iowa.....      | 470                             | 465                | 19.2                    | 8,928           | 88                         | 7,857                    | 114           | 10.3                    | 1,174           | 85                         | 1,083                    |
| Mo.....        | 3,219                           | 3,155              | 10.9                    | 34,390          | 99                         | 34,046                   | 6             | 12.0                    | 72              | 99                         | 71                       |
| N. Dak.....    |                                 |                    |                         |                 |                            |                          | 8,827         | 8.3                     | 73,264          | 85                         | 62,274                   |
| S. Dak.....    | 81                              | 75                 | 14.0                    | 1,050           | 87                         | 914                      | 2,770         | 9.0                     | 24,930          | 87                         | 21,639                   |
| Nebr.....      | 3,539                           | 3,762              | 15.3                    | 57,559          | 83                         | 47,774                   | 205           | 11.3                    | 2,316           | 83                         | 1,922                    |
| Kans.....      | 11,454                          | 10,538             | 12.2                    | 128,564         | 93                         | 119,565                  | 16            | 8.2                     | 131             | 93                         | 122                      |
| Ky.....        | 657                             | 634                | 10.0                    | 6,340           | 115                        | 7,291                    |               |                         |                 |                            |                          |
| Tenn.....      | 459                             | 450                | 10.0                    | 4,500           | 120                        | 5,400                    |               |                         |                 |                            |                          |
| Ala.....       | 21                              | 20                 | 10.5                    | 210             | 153                        | 321                      |               |                         |                 |                            |                          |
| Miss.....      | 8                               | 6                  | 14.0                    | 84              | 130                        | 109                      |               |                         |                 |                            |                          |
| Tex.....       | 2,168                           | 2,081              | 10.0                    | 20,810          | 100                        | 20,810                   |               |                         |                 |                            |                          |
| Okl.....       | 3,944                           | 3,783              | 12.5                    | 47,325          | 80                         | 40,700                   |               |                         |                 |                            |                          |
| Ark.....       | 107                             | 103                | 9.3                     | 958             | 100                        | 958                      |               |                         |                 |                            |                          |
| Mont.....      | 403                             | 302                | 14.0                    | 4,228           | 85                         | 3,594                    | 1,995         | 12.0                    | 23,940          | 85                         | 20,349                   |
| Wyo.....       | 45                              | 41                 | 18.0                    | 738             | 79                         | 583                      | 158           | 17.0                    | 2,686           | 79                         | 2,122                    |
| Colo.....      | 1,496                           | 1,846              | 12.0                    | 16,152          | 70                         | 12,276                   | 373           | 19.0                    | 7,087           | 76                         | 5,336                    |
| N. Mex.....    | 189                             | 170                | 12.6                    | 2,142           | 105                        | 2,249                    | 57            | 16.6                    | 946             | 105                        | 993                      |
| Ark.....       | 44                              | 40                 | 21.0                    | 840             | 125                        | 1,050                    |               |                         |                 |                            |                          |
| Utah.....      | 156                             | 150                | 19.9                    | 2,985           | 75                         | 2,239                    | 126           | 20.3                    | 3,314           | 75                         | 2,480                    |
| Nev.....       | 8                               | 3                  | 20.2                    | 61              | 130                        | 79                       | 18            | 24.0                    | 432             | 130                        | 562                      |
| Idaho.....     | 436                             | 423                | 24.3                    | 10,270          | 72                         | 7,401                    | 700           | 24.0                    | 16,800          | 72                         | 12,096                   |
| Wash.....      | 1,360                           | 1,333              | 23.1                    | 37,457          | 86                         | 32,213                   | 1,147         | 15.0                    | 17,206          | 86                         | 14,796                   |
| Oreg.....      | 513                             | 805                | 25.0                    | 20,125          | 85                         | 17,106                   | 262           | 16.0                    | 4,192           | 85                         | 3,563                    |
| Calif.....     | 774                             | 557                | 15.0                    | 8,355           | 107                        | 8,940                    |               |                         |                 |                            |                          |
| U. S.....      | 44,885                          | 42,702             | 13.7                    | 587,032         | 95.2                       | 558,725                  | 19,706        | 10.5                    | 207,861         | 86.8                       | 178,343                  |
| 1920.....      | 44,861                          | 40,016             | 15.3                    | 610,597         | 148.6                      | 907,291                  | 21,127        | 10.5                    | 222,430         | 130.4                      | 269,972                  |
| 1919.....      | 51,483                          | 50,494             | 15.1                    | 760,377         | 210.5                      | 1,600,805                | 25,200        | 8.2                     | 207,002         | 230.9                      | 195,251                  |
| 1918.....      | 42,301                          | 37,130             | 15.2                    | 565,099         | 206.3                      | 1,165,995                | 22,051        | 16.2                    | 356,339         | 200.9                      | 715,831                  |
| 1917.....      | 40,534                          | 27,257             | 15.1                    | 412,901         | 202.8                      | 837,237                  | 17,832        | 12.5                    | 223,754         | 197.0                      | 440,875                  |
| 1916.....      | 39,203                          | 34,709             | 13.8                    | 480,553         | 162.7                      | 781,906                  | 17,607        | 8.8                     | 155,765         | 152.8                      | 238,062                  |
| 1915.....      | 42,881                          | 41,308             | 16.3                    | 673,947         | 94.7                       | 638,149                  | 19,161        | 18.4                    | 351,354         | 86.4                       | 304,154                  |
| 1914.....      | 37,128                          | 35,003             | 19.0                    | 664,990         | 98.6                       | 675,623                  | 17,533        | 11.8                    | 206,027         | 98.6                       | 203,057                  |
| 1913.....      | 33,613                          | 31,699             | 16.5                    | 523,561         | 82.9                       | 433,995                  | 18,485        | 13.0                    | 239,819         | 73.4                       | 176,127                  |
| 1912.....      | 33,215                          | 26,571             | 15.1                    | 399,919         | 80.9                       | 323,572                  | 19,243        | 17.2                    | 330,348         | 70.1                       | 231,708                  |
| 1911.....      | 32,648                          | 29,162             | 14.8                    | 430,656         | 88.0                       | 379,151                  | 20,381        | 9.4                     | 190,682         | 80.0                       | 163,912                  |
| 1910.....      | 31,656                          | 27,329             | 15.9                    | 434,142         | 88.1                       | 382,318                  | 18,352        | 11.0                    | 200,979         | 88.9                       | 178,733                  |
| 1905-1909..... | 31,016                          | 29,019             | 15.1                    | 437,637         | 85.4                       | 373,831                  | 17,419        | 14.0                    | 244,375         | 80.2                       | 195,899                  |
| 1900-1904..... | 31,965                          | 28,887             | 13.5                    | 390,690         | 71.8                       | 280,095                  | 17,540        | 13.4                    | 235,505         | 64.8                       | 152,628                  |
| 1895-1899..... | 25,994                          | 23,896             | 12.8                    | 305,398         | 69.0                       | 210,808                  | 15,469        | 14.5                    | 224,080         | 56.7                       | 127,072                  |
| 1890-1894..... | 24,778                          |                    | 13.1                    | 325,533         | 69.7                       | 226,911                  | 12,036        | 12.6                    | 151,145         | 62.8                       | 94,975                   |

WHEAT—Continued.

TABLE 24.—Wheat: Production and distribution in the United States, 1897-1921.

[000 omitted, under bushels.]

| Year.          | Stocks<br>in mills<br>and<br>elevators<br>July 1. | Old<br>stock<br>on<br>farms<br>July 1. | Crop.           |                          |                  | Total<br>sup-<br>plies. | Stock on<br>farms<br>Mar. 1<br>fol-<br>lowing. | Stocks<br>in mills<br>and<br>elevators<br>Mar. 1. | Shipped<br>out of<br>county<br>where<br>grown. |
|----------------|---|--|-----------------|--------------------------|------------------|-------------------------|--|---|--|
|                |   |  | Quan-<br>tity.  | Weight<br>per<br>bushel. | Quality.         |                         |  |   |  |
|                | <i>Bushels.</i>                                   | <i>Bushels.</i>                        | <i>Bushels.</i> | <i>Pounds.</i>           | <i>Per cent.</i> | <i>Bushels.</i>         | <i>Bushels.</i>                                | <i>Bushels.</i>                                   | <i>Bushels.</i>                                |
| 1897-1901..... | 37,340  | 604,658                                | 57.1            | 87.0                     | 641,998          | 155,915                 | .....  | 325,423   |  |
| 1902-1906..... | 40,384  | 657,705                                | 57.2            | .....                    | 698,089          | 154,551                 | .....  | 378,450   |  |
| 1907.....      | 54,853  | 634,087                                | 58.2            | 89.9                     | 688,940          | 148,721                 | .....  | 367,607   |  |
| 1908.....      | 33,797  | 664,602                                | 58.3            | 89.4                     | 698,399          | 143,692                 | .....  | 393,435   |  |
| 1909.....      | 15,062  | 683,379                                | 57.9            | 90.4                     | 698,441          | 159,100                 | .....  | 414,166   |  |
| 1910.....      | 35,680  | 635,121                                | 58.5            | 93.1                     | 670,801          | 162,705                 | 98,597   | 352,906   |  |
| 1911.....      | 34,071  | 621,338                                | 57.8            | 88.3                     | 655,409          | 122,041                 | 95,710   | 348,739   |  |
| 1912.....      | 23,876  | 730,267                                | 58.3            | 90.0                     | 754,143          | 156,471                 | 118,400  | 449,881   |  |
| 1913.....      | 25,515  | 763,380                                | 58.7            | 93.2                     | 798,895          | 151,795                 | 93,627   | 411,733   |  |
| 1914.....      | 32,236  | 891,017                                | 58.0            | 89.7                     | 923,253          | 152,908                 | 85,955   | 541,193   |  |
| 1915.....      | 28,972  | 1,025,801                              | 57.9            | 88.4                     | 1,054,773        | 244,448                 | 155,027  | 633,350   |  |
| 1916.....      | 74,731  | 636,318                                | 57.1            | 87.0                     | 711,049          | 100,650                 | 89,173   | 361,088   |  |
| 1917.....      | 15,611  | 636,655                                | 58.5            | 92.4                     | 632,266          | 107,745                 | 66,138   | 325,500   |  |
| 1918.....      | 8,093   | 921,488                                | 58.8            | 93.1                     | 929,501          | 128,703                 | 107,037  | 541,066   |  |
| 1919.....      | 19,336  | 10,261                                 | 967,979         | 56.3                     | 82.1             | 957,240                 | 169,904  | 123,233   | 591,552  |
| 1920.....      | 36,180  | 49,516                                 | 833,027         | 57.4                     | 88.9             | 882,573                 | 217,037  | 87,075  | 491,035  |
| 1921.....      | 25,058  | 56,707                                 | 794,593         | 56.6                     | 85.8             | 851,600                 | 131,136  | 72,564  | 489,413  |

TABLE 25.—Winter and spring wheat: Condition of crop, United States, on first of months named, and per cent of winter wheat area abandoned, 1900-1922.

| Year.          | Winter wheat.              |                 |        |        |        |                 | Spring wheat. |        |         |                 |
|----------------|----------------------------|-----------------|--------|--------|--------|-----------------|---------------|--------|---------|-----------------|
|                | December of previous year. | Area abandoned. | April. | May.   | June.  | When harvested. | June.         | July.  | August. | When harvested. |
|                | P. ct.                     | P. ct.          | P. ct. | P. ct. | P. ct. | P. ct.          | P. ct.        | P. ct. | P. ct.  | P. ct.          |
| 1900-1904..... | 83.4                       | .....           | 85.3   | 85.7   | 81.3   | 80.7            | 92.8          | 83.9   | 78.2    | 73.2            |
| 1905-1909..... | 83.5                       | 6.6             | 88.8   | 87.8   | 82.5   | 81.9            | 93.2          | 90.3   | 85.6    | 82.8            |
| 1910.....      | 95.8                       | 13.7            | 80.8   | 82.1   | 80.0   | 81.5            | 92.8          | 91.6   | 61.0    | 63.1            |
| 1911.....      | 82.5                       | 10.7            | 83.3   | 86.1   | 80.4   | 76.8            | 94.6          | 73.8   | 59.8    | 56.7            |
| 1912.....      | 80.6                       | 20.1            | 80.6   | 76.7   | 74.3   | 73.3            | 95.8          | 89.3   | 90.4    | 90.8            |
| 1913.....      | 93.2                       | 4.7             | 91.6   | 91.9   | 83.5   | 81.6            | 93.5          | 73.8   | 74.1    | 75.3            |
| 1914.....      | 97.2                       | 3.1             | 95.6   | 95.9   | 92.7   | 94.1            | 95.5          | 92.1   | 75.5    | 88.0            |
| 1915.....      | 88.3                       | 2.7             | 88.8   | 92.9   | 85.8   | 84.4            | 94.9          | 93.3   | 93.4    | 91.6            |
| 1916.....      | 87.7                       | 11.4            | 78.3   | 82.4   | 73.2   | 75.7            | 88.2          | 89.0   | 63.4    | 44.6            |
| 1917.....      | 85.7                       | 31.0            | 63.4   | 73.2   | 70.9   | 75.9            | 91.6          | 83.8   | 68.7    | 71.2            |
| 1918.....      | 79.3                       | 13.7            | 78.6   | 86.4   | 83.8   | 79.5            | 95.2          | 80.1   | 79.6    | 82.1            |
| 1919.....      | 88.6                       | 1.1             | 99.8   | 100.5  | 94.9   | 80.0            | 91.2          | 80.6   | 53.9    | 48.5            |
| 1920.....      | 85.2                       | 11.9            | 75.6   | 79.1   | 78.2   | 79.7            | 89.1          | 88.0   | 73.4    | 64.1            |
| 1921.....      | 87.9                       | 4.6             | 91.0   | 88.8   | 77.9   | 77.2            | 93.4          | 80.8   | 66.6    | 62.5            |
| 1922.....      | 76.0                       | 14.5            | 78.4   | 83.5   | .....  | .....           | .....         | .....  | .....   | .....           |

## WHEAT—Continued.

TABLE 26.—*Winter wheat: Forecast of production, monthly, with preliminary and final estimates.*

[000 omitted.]

| Year.        | May.            | June.           | July.           | August<br>production<br>estimate. | Final<br>estimate.    |
|--------------|-----------------|-----------------|-----------------|-----------------------------------|-----------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>                   | <i>Bushels.</i>       |
| 1912.....    | 370, 714        | 363, 000        | 358, 000        | 389, 942                          | 399, 919              |
| 1913.....    | 513, 571        | 492, 000        | 493, 000        | 510, 519                          | 523, 561              |
| 1914.....    | 630, 319        | 639, 541        | 652, 975        | 675, 115                          | 684, 990              |
| 1915.....    | 692, 924        | 675, 500        | 668, 291        | 656, 866                          | 673, 947              |
| 1916.....    | 499, 280        | 469, 066        | 489, 080        | 454, 708                          | 480, 553              |
| 1917.....    | 366, 116        | 373, 032        | 402, 378        | 417, 347                          | 412, 901              |
| 1918.....    | 572, 539        | 586, 915        | 557, 339        | 555, 725                          | 565, 099              |
| 1919.....    | 899, 915        | 892, 822        | 838, 582        | 715, 301                          | 790, 377              |
| 1920.....    | 484, 647        | 503, 996        | 518, 245        | 532, 641                          | 610, 597              |
| Average..... | 558, 892        | 555, 097        | 551, 982        | 545, 351                          | 567, 994              |
| 1921.....    | 629, 287        | 578, 342        | 573, 930        | 543, 879                          | <sup>1</sup> 587, 032 |

<sup>1</sup> Preliminary.TABLE 27.—*Spring wheat: Forecast of production, monthly, with preliminary and final estimates.*

[000 omitted.]

| Year.        | June.           | July.           | August.         | September.      | October<br>production<br>estimate. | Final<br>estimate.    |
|--------------|-----------------|-----------------|-----------------|-----------------|------------------------------------|-----------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>                    | <i>Bushels.</i>       |
| 1912.....    | 265, 000        | 271, 000        | 290, 000        | 300, 000        | 330, 391                           | 330, 348              |
| 1913.....    | 252, 000        | 218, 000        | 233, 000        | 243, 000        | 242, 714                           | 239, 519              |
| 1914.....    | 262, 135        | 274, 003        | 238, 120        | 221, 482        | 216, 835                           | 206, 027              |
| 1915.....    | 273, 513        | 294, 977        | 307, 250        | 322, 463        | 345, 163                           | 351, 854              |
| 1916.....    | 245, 801        | 269, 517        | 199, 329        | 156, 351        | 152, 851                           | 155, 765              |
| 1917.....    | 282, 813        | 275, 970        | 236, 019        | 250, 359        | 242, 450                           | 223, 754              |
| 1918.....    | 343, 987        | 333, 561        | 322, 205        | 342, 855        | 363, 195                           | 358, 339              |
| 1919.....    | 343, 181        | 322, 096        | 225, 080        | 208, 049        | 203, 170                           | 207, 602              |
| 1920.....    | 276, 547        | 291, 355        | 261, 506        | 237, 374        | 218, 007                           | 222, 430              |
| Average..... | 282, 775        | 283, 390        | 256, 723        | 253, 548        | 257, 197                           | 254, 882              |
| 1921.....    | 251, 289        | 235, 482        | 212, 946        | 209, 979        | 196, 776                           | <sup>1</sup> 207, 861 |

<sup>1</sup> Preliminary.

## WHEAT—Continued.

TABLE 28.—Winter and spring wheat: Yield per acre, in States producing both, 1917-21, and average 1917-21.

| State.          | Winter wheat.                   |              |              |              |              |              | Spring wheat.                   |              |              |              |              |              |
|-----------------|---------------------------------|--------------|--------------|--------------|--------------|--------------|---------------------------------|--------------|--------------|--------------|--------------|--------------|
|                 | 5-yr.<br>aver.<br>1917-<br>1921 | 1917         | 1918         | 1919         | 1920         | 1921         | 5-yr.<br>aver.<br>1917-<br>1921 | 1917         | 1918         | 1919         | 1920         | 1921         |
|                 | <i>Bush.</i>                    | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i>                    | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> |
| New York.....   | 20.6                            | 21.0         | 18.0         | 22.0         | 22.3         | 19.5         | 17.7                            | 21.0         | 20.0         | 15.0         | 18.0         | 14.5         |
| Pennsylvania... | 17.2                            | 17.5         | 17.0         | 17.5         | 16.6         | 17.5         | 15.8                            | .....        | 17.0         | 15.0         | 16.0         | 15.0         |
| Ohio.....       | 17.2                            | 22.0         | 19.0         | 20.0         | 12.7         | 12.4         | 15.8                            | .....        | 21.5         | 16.0         | 13.0         | 12.5         |
| Indiana.....    | 15.7                            | 18.5         | 21.0         | 15.0         | 12.0         | 12.0         | 15.2                            | 20.0         | 23.0         | 9.0          | 12.0         | 12.0         |
| Illinois.....   | 17.8                            | 18.5         | 21.5         | 17.5         | 15.1         | 16.2         | 19.5                            | 25.0         | 26.9         | 14.5         | 16.5         | 14.5         |
| Michigan.....   | 16.8                            | 18.0         | 14.0         | 20.3         | 15.6         | 16.0         | 13.2                            | 17.7         | 18.0         | 11.2         | 10.0         | 9.0          |
| Wisconsin.....  | 20.6                            | 24.0         | 21.2         | 19.6         | 22.0         | 16.0         | 16.4                            | 21.2         | 24.7         | 12.4         | 12.6         | 11.1         |
| Minnesota.....  | 16.9                            | 18.0         | 18.0         | 15.0         | 19.6         | 14.0         | 13.4                            | 17.5         | 21.0         | 9.3          | 9.5          | 9.5          |
| Iowa.....       | 19.0                            | 17.5         | 20.5         | 18.3         | 19.7         | 19.2         | 14.1                            | 21.5         | 18.0         | 9.5          | 11.3         | 10.3         |
| Missouri.....   | 13.9                            | 15.3         | 17.2         | 13.5         | 12.5         | 10.9         | 11.6                            | 9.0          | 15.6         | 8.5          | 13.0         | 12.0         |
| South Dakota..  | 14.5                            | 14.0         | 17.0         | 13.0         | 14.5         | 14.0         | 11.8                            | 14.0         | 19.0         | 8.0          | 9.0          | 9.0          |
| Nebraska.....   | 14.1                            | 12.0         | 11.1         | 14.8         | 17.4         | 15.3         | 11.5                            | 16.5         | 11.9         | 8.5          | 9.5          | 11.3         |
| Kansas.....     | 13.5                            | 12.2         | 14.1         | 13.8         | 15.4         | 12.2         | 8.8                             | 6.0          | 8.0          | 9.3          | 12.5         | 8.2          |
| Montana.....    | 11.4                            | 13.0         | 12.7         | 5.2          | 12.0         | 14.0         | 9.2                             | 9.0          | 12.5         | 2.3          | 10.0         | 12.0         |
| Wyoming.....    | 18.8                            | 20.0         | 24.0         | 12.0         | 20.0         | 18.0         | 20.0                            | 22.0         | 26.0         | 15.0         | 20.0         | 17.0         |
| Colorado.....   | 15.2                            | 23.0         | 10.5         | 13.2         | 17.5         | 12.0         | 18.7                            | 22.0         | 17.5         | 15.4         | 19.4         | 19.0         |
| New Mexico....  | 14.0                            | 10.0         | 10.0         | 10.1         | 18.2         | 12.6         | 19.2                            | 18.0         | 24.0         | 18.7         | 18.5         | 16.6         |
| Utah.....       | 15.8                            | 14.0         | 16.6         | 12.7         | 15.9         | 19.9         | 23.5                            | 25.0         | 23.8         | 18.7         | 23.7         | 20.3         |
| Nevada.....     | 22.7                            | 26.0         | 29.0         | 19.7         | 18.7         | 20.2         | 24.3                            | 28.0         | 25.0         | 21.4         | 23.0         | 24.0         |
| Idaho.....      | 20.6                            | 18.0         | 22.0         | 18.5         | 20.0         | 24.3         | 21.8                            | 22.0         | 21.0         | 18.0         | 24.0         | 24.0         |
| Washington....  | 23.6                            | 21.5         | 23.5         | 21.1         | 24.0         | 28.1         | 12.6                            | 13.6         | 9.5          | 13.0         | 11.9         | 15.0         |
| Oregon.....     | 20.6                            | 17.5         | 17.0         | 21.2         | 22.2         | 25.0         | 13.6                            | 11.0         | 13.0         | 13.0         | 17.0         | 16.0         |
| United States   | 14.9                            | 15.1         | 15.2         | 15.1         | 15.3         | 13.7         | 11.6                            | 12.5         | 16.2         | 8.2          | 10.5         | 10.5         |

## WHEAT—Continued.

TABLE 29.—Wheat: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.  | Yield per acre (bushels).     |      |      |      |      | Farm price per bushel (cents). |       |      |      |      |      |       |       |       |       | Value per acre <sup>1</sup> (dollars). |                               |       |       |
|---------|-------------------------------|------|------|------|------|--------------------------------|-------|------|------|------|------|-------|-------|-------|-------|--|-------------------------------|-------|-------|
|         |                               |      |      |      |      |                                |       |      |      |      |      |       |       |       |       |  |                               |       |       |
|         | 5-year average,<br>1917-1921. | 1917 | 1918 | 1919 | 1920 | 10-year average,<br>1912-1921. | 1912  | 1913 | 1914 | 1915 | 1916 | 1917  | 1918  | 1919  | 1920  | 1921                                   | 5-year average,<br>1916-1920. | 1921  |       |
| Me.     | 18.8                          | 14.0 | 22.0 | 18.8 | 22.0 | 17.0                           | 171   | 103  | 101  | 109  | 112  | 187   | 235   | 237   | 220   | 230                                    | 175                           | 45.50 | 29.75 |
| Vt.     | 18.2                          | 20.0 | 22.0 | 16.0 | 19.0 | 14.0                           | 159   | 93   | 100  | 100  | 107  | 165   | 236   | 231   | 227   | 200                                    | 125                           | 42.72 | 17.50 |
| N. Y.   | 20.2                          | 21.0 | 18.2 | 21.0 | 21.8 | 19.2                           | 149   | 99   | 93   | 108  | 101  | 168   | 210   | 215   | 215   | 175                                    | 108                           | 40.36 | 29.70 |
| N. J.   | 17.8                          | 19.0 | 17.0 | 18.0 | 16.0 | 19.0                           | 154   | 98   | 96   | 109  | 106  | 164   | 213   | 215   | 220   | 205                                    | 113                           | 36.44 | 21.47 |
| Pa.     | 17.2                          | 17.5 | 17.0 | 17.5 | 16.6 | 17.5                           | 146   | 95   | 91   | 104  | 104  | 162   | 205   | 214   | 216   | 170                                    | 103                           | 33.81 | 18.02 |
| Del.    | 14.0                          | 16.5 | 13.0 | 12.0 | 17.0 | 11.5                           | 148   | 96   | 88   | 109  | 109  | 162   | 208   | 222   | 213   | 171                                    | 98                            | 28.42 | 11.27 |
| Md.     | 15.4                          | 17.0 | 15.5 | 13.5 | 17.0 | 14.0                           | 148   | 95   | 89   | 108  | 105  | 171   | 207   | 219   | 215   | 165                                    | 108                           | 30.71 | 14.42 |
| Va.     | 11.8                          | 13.0 | 12.0 | 11.8 | 12.5 | 9.8                            | 153   | 101  | 96   | 108  | 108  | 165   | 216   | 219   | 224   | 180                                    | 116                           | 24.85 | 11.87 |
| W. Va.  | 13.8                          | 14.0 | 14.2 | 13.5 | 12.5 | 12.5                           | 154   | 101  | 100  | 108  | 108  | 160   | 217   | 221   | 220   | 190                                    | 117                           | 27.68 | 14.62 |
| N. C.   | 8.5                           | 10.0 | 7.0  | 7.9  | 11.7 | 7.5                            | 168   | 111  | 106  | 117  | 120  | 176   | 234   | 230   | 233   | 210                                    | 144                           | 20.19 | 10.80 |
| S. C.   | 10.7                          | 10.5 | 11.0 | 10.0 | 11.0 | 11.0                           | 199   | 119  | 130  | 145  | 138  | 189   | 200   | 260   | 258   | 255                                    | 203                           | 26.59 | 22.88 |
| Ga.     | 9.9                           | 8.5  | 10.0 | 10.0 | 10.0 | 10.5                           | 192   | 122  | 120  | 134  | 129  | 186   | 290   | 266   | 263   | 240                                    | 175                           | 34.92 | 13.38 |
| Ohio.   | 17.2                          | 22.0 | 20.0 | 19.0 | 19.9 | 12.7                           | 147   | 98   | 90   | 105  | 104  | 169   | 204   | 212   | 212   | 165                                    | 108                           | 34.23 | 19.39 |
| Ind.    | 15.7                          | 13.5 | 21.0 | 14.9 | 12.0 | 12.0                           | 145   | 93   | 88   | 103  | 102  | 169   | 203   | 208   | 210   | 167                                    | 106                           | 30.57 | 12.72 |
| Ill.    | 17.8                          | 13.7 | 22.1 | 17.1 | 15.2 | 16.1                           | 142   | 88   | 86   | 101  | 100  | 165   | 201   | 208   | 210   | 161                                    | 100                           | 32.42 | 15.10 |
| Mich.   | 16.5                          | 13.0 | 14.2 | 13.4 | 15.3 | 15.7                           | 145   | 96   | 89   | 103  | 101  | 167   | 204   | 209   | 210   | 168                                    | 104                           | 32.11 | 16.33 |
| Wis.    | 17.6                          | 22.3 | 24.2 | 23.5 | 15.1 | 13.1                           | 139   | 83   | 82   | 100  | 95   | 160   | 202   | 205   | 215   | 154                                    | 97                            | 35.02 | 12.71 |
| Minn.   | 13.5                          | 17.5 | 20.9 | 9.4  | 9.4  | 9.7                            | 139   | 73   | 76   | 102  | 90   | 162   | 202   | 204   | 250   | 130                                    | 107                           | 25.31 | 9.41  |
| Iowa.   | 17.7                          | 19.0 | 18.9 | 14.8 | 17.5 | 17.4                           | 132   | 78   | 76   | 96   | 87   | 156   | 199   | 200   | 200   | 140                                    | 88                            | 31.39 | 15.31 |
| Mo.     | 13.9                          | 15.3 | 17.2 | 13.5 | 12.5 | 10.9                           | 140   | 90   | 84   | 98   | 98   | 165   | 185   | 205   | 209   | 160                                    | 99                            | 25.47 | 10.79 |
| N. Dak. | 9.2                           | 8.0  | 13.6 | 6.9  | 9.0  | 8.3                            | 134   | 69   | 73   | 101  | 87   | 152   | 200   | 203   | 241   | 130                                    | 85                            | 16.06 | 7.06  |
| S. Dak. | 11.9                          | 14.0 | 19.0 | 8.2  | 9.2  | 6.1                            | 131   | 69   | 71   | 94   | 86   | 150   | 196   | 199   | 240   | 115                                    | 87                            | 21.14 | 7.92  |
| Nebr.   | 14.1                          | 13.8 | 11.2 | 13.8 | 16.8 | 15.1                           | 129   | 69   | 71   | 95   | 84   | 160   | 195   | 197   | 202   | 131                                    | 83                            | 25.08 | 12.53 |
| Kans.   | 13.5                          | 12.2 | 14.1 | 13.8 | 15.4 | 12.2                           | 134   | 74   | 79   | 95   | 89   | 164   | 198   | 199   | 215   | 130                                    | 93                            | 24.32 | 11.53 |
| Ky.     | 11.3                          | 12.0 | 13.0 | 11.5 | 10.2 | 10.0                           | 151   | 99   | 96   | 103  | 105  | 166   | 212   | 214   | 211   | 191                                    | 115                           | 22.39 | 11.50 |
| Tenn.   | 9.6                           | 9.2  | 10.0 | 9.3  | 9.5  | 10.0                           | 155   | 100  | 98   | 105  | 108  | 169   | 222   | 214   | 222   | 195                                    | 120                           | 10.41 | 12.00 |
| Ala.    | 9.6                           | 10.0 | 9.0  | 9.0  | 9.6  | 10.5                           | 181   | 113  | 115  | 126  | 125  | 185   | 270   | 245   | 245   | 230                                    | 153                           | 22.15 | 16.06 |
| Miss.   | 13.9                          | 15.0 | 16.5 | 14.0 | 10.0 | 14.0                           | 174   | 97   | 95   | 125  | 105  | 175   | 300   | 250   | 260   | 213                                    | 130                           | 33.76 | 18.20 |
| Tex.    | 12.3                          | 12.0 | 10.0 | 16.5 | 13.0 | 10.0                           | 146   | 93   | 94   | 99   | 107  | 173   | 210   | 215   | 200   | 172                                    | 100                           | 24.22 | 12.00 |
| Okla.   | 13.3                          | 11.5 | 12.6 | 14.0 | 16.0 | 12.5                           | 133   | 75   | 82   | 92   | 89   | 167   | 194   | 210   | 205   | 135                                    | 86                            | 22.83 | 10.75 |
| Ark.    | 11.3                          | 16.0 | 12.0 | 9.5  | 9.5  | 9.3                            | 145   | 94   | 90   | 99   | 101  | 163   | 201   | 207   | 202   | 190                                    | 100                           | 21.46 | 9.30  |
| Mont.   | 9.7                           | 10.4 | 12.6 | 2.7  | 10.3 | 12.3                           | 129   | 64   | 66   | 91   | 78   | 161   | 102   | 194   | 235   | 128                                    | 85                            | 19.00 | 10.46 |
| Wyo.    | 19.6                          | 21.2 | 23.5 | 14.4 | 20.0 | 17.2                           | 128   | 80   | 72   | 89   | 78   | 145   | 200   | 189   | 212   | 135                                    | 79                            | 35.85 | 13.69 |
| Colo.   | 10.0                          | 22.6 | 12.3 | 13.7 | 13.0 | 13.5                           | 127   | 73   | 78   | 87   | 80   | 150   | 193   | 195   | 202   | 135                                    | 76                            | 29.85 | 10.26 |
| N. Mex. | 16.1                          | 12.7 | 16.7 | 10.0 | 13.3 | 13.6                           | 139   | 90   | 97   | 90   | 90   | 150   | 215   | 210   | 200   | 140                                    | 105                           | 30.75 | 14.28 |
| Ariz.   | 24.2                          | 25.0 | 26.0 | 25.0 | 24.0 | 21.0                           | 167   | 110  | 110  | 125  | 115  | 150   | 210   | 240   | 225   | 262                                    | 125                           | 55.51 | 26.25 |
| Utah.   | 19.4                          | 19.0 | 20.2 | 15.4 | 19.5 | 22.8                           | 128   | 75   | 73   | 96   | 86   | 152   | 178   | 188   | 210   | 153                                    | 75                            | 33.28 | 17.10 |
| Nev.    | 24.1                          | 27.8 | 25.5 | 22.1 | 22.3 | 23.5                           | 142   | 100  | 82   | 95   | 95   | 140   | 180   | 206   | 214   | 180                                    | 130                           | 45.71 | 19.33 |
| Idaho.  | 21.3                          | 20.3 | 21.3 | 18.2 | 22.2 | 24.1                           | 122   | 66   | 63   | 87   | 80   | 146   | 182   | 192   | 205   | 125                                    | 72                            | 35.68 | 17.35 |
| Wash.   | 16.9                          | 15.8 | 13.1 | 16.8 | 16.9 | 22.0                           | 129   | 68   | 73   | 100  | 82   | 143   | 193   | 196   | 214   | 135                                    | 86                            | 29.77 | 18.92 |
| Oreg.   | 18.4                          | 14.5 | 14.7 | 19.2 | 20.9 | 22.8                           | 129   | 72   | 75   | 102  | 84   | 145   | 182   | 201   | 212   | 130                                    | 85                            | 31.43 | 19.38 |
| Calif.  | 15.9                          | 19.8 | 15.0 | 15.5 | 14.0 | 15.0                           | 145   | 93   | 95   | 104  | 95   | 152   | 200   | 216   | 204   | 180                                    | 107                           | 30.63 | 16.05 |
| U. S.   | 13.8                          | 14.1 | 15.6 | 12.8 | 13.6 | 12.7                           | 138.3 | 76.0 | 79.9 | 98.6 | 91.9 | 160.3 | 200.8 | 204.2 | 214.9 | 143.7                                  | 92.7                          | 25.34 | 11.81 |

<sup>1</sup> Based upon farm price Dec. 1.

WHEAT—Continued.

TABLE 30.—Wheat: *Extent and causes of yearly crop losses, 1909–1920.*

| Year.        | Deficient moisture. | Excessive moisture. | Floods. | Frost or freeze. | Hail.  | Hot winds. | Storms. | Total climatic. | Plant disease. | Insect pests. | Animal pests. | Defective seed. | Total. |
|--------------|---------------------|---------------------|---------|------------------|--------|------------|---------|-----------------|----------------|---------------|---------------|-----------------|--------|
|              | P. ct.              | P. ct.              | P. ct.  | P. ct.           | P. ct. | P. ct.     | P. ct.  | P. ct.          | P. ct.         | P. ct.        | P. ct.        | P. ct.          | P. ct. |
| 1920.....    | 8.1                 | 2.3                 | 0.2     | 1.0              | 1.0    | 1.5        | 0.4     | 17.6            | 9.5            | 4.4           | 0.1           | 0.1             | 32.2   |
| 1919.....    | 12.3                | 6.3                 | .4      | 1.3              | .8     | 2.9        | .3      | 24.3            | 10.2           | 2.5           | .1            | (3)             | 37.6   |
| 1918.....    | 14.6                | .3                  | .1      | 3.8              | 1.1    | 2.0        | .3      | 22.4            | 1.5            | 1.1           | .3            | .1              | 25.7   |
| 1917.....    | 19.1                | .4                  | .1      | 11.8             | 1.0    | 1.6        | .2      | 34.4            | .7             | .7            | .1            | .1              | 38.3   |
| 1916.....    | 6.9                 | 3.8                 | .6      | 5.1              | 1.3    | 2.7        | .2      | 21.2            | 12.6           | 4.0           | .1            | .1              | 38.7   |
| 1915.....    | 1.3                 | 7.3                 | 1.0     | 1.2              | 1.6    | .1         | .4      | 13.0            | 2.4            | 3.6           | .1            | .1              | 19.7   |
| 1914.....    | 6.7                 | 1.4                 | .1      | 1.1              | 1.0    | 2.7        | .2      | 13.4            | 3.0            | 2.6           | .1            | .1              | 19.8   |
| 1913.....    | 14.2                | .4                  | .2      | 1.9              | .7     | 1.7        | .3      | 20.0            | .3             | 2.2           | .1            | .1              | 23.5   |
| 1912.....    | 8.1                 | 1.8                 | .3      | 9.5              | 1.5    | 1.8        | .4      | 24.0            | 1.8            | 2.3           | .3            | .2              | 29.5   |
| 1911.....    | 25.5                | .8                  | (1)     | 1.5              | .4     | 3.8        | .1      | 32.3            | 1.9            | 1.9           | .3            | .2              | 37.3   |
| 1910.....    | 18.9                | .9                  | .2      | 6.6              | .5     | 2.6        | .2      | 30.0            | .9             | 1.9           | .4            | .4              | 33.8   |
| 1909.....    | 8.5                 | 3.2                 | .7      | 2.4              | 2.0    | 1.2        | .6      | 18.9            | 1.6            | 1.1           | .2            | .3              | 22.8   |
| Average..... | 12.0                | 2.4                 | .3      | 3.9              | 1.1    | 2.0        | .3      | 22.6            | 3.9            | 2.4           | .2            | .2              | 29.8   |

<sup>1</sup> Less than 0.05 per cent.

TABLE 31.—Wheat: *Farm price, cents per bushel on first of each month, 1908–1921.*

| Year.            | Janu-ary. | Feb-ruary. | March. | April. | May.  | June. | July. | Aug-ust. | Sept-ember. | Octo-ber. | Nov-ember. | Dec-ember. | Aver-age. |
|------------------|-----------|------------|--------|--------|-------|-------|-------|----------|-------------|-----------|------------|------------|-----------|
| 1908.....        | 88.7      | 89.0       | 89.2   | 89.8   | 89.3  | 92.3  | 89.5  | 90.4     | 83.7        | 90.4      | 91.5       | 92.8       | 90.3      |
| 1909.....        | 93.5      | 95.2       | 103.9  | 107.0  | 115.9 | 123.5 | 120.8 | 107.1    | 95.2        | 94.6      | 99.9       | 98.6       | 101.3     |
| 1910.....        | 103.4     | 105.0      | 105.1  | 104.8  | 99.9  | 97.6  | 95.3  | 98.9     | 95.8        | 93.7      | 90.5       | 88.3       | 96.5      |
| 1911.....        | 88.0      | 89.8       | 85.4   | 83.2   | 84.6  | 86.3  | 84.3  | 82.7     | 84.8        | 88.4      | 91.5       | 87.4       | 88.9      |
| 1912.....        | 88.0      | 90.4       | 90.7   | 92.5   | 99.7  | 102.8 | 99.0  | 89.7     | 85.8        | 83.4      | 83.8       | 78.0       | 87.4      |
| 1913.....        | 76.2      | 79.9       | 80.6   | 79.1   | 80.9  | 82.7  | 81.4  | 77.1     | 77.1        | 77.9      | 77.0       | 79.9       | 78.4      |
| 1914.....        | 81.0      | 81.6       | 83.1   | 84.2   | 83.9  | 84.4  | 76.9  | 76.5     | 93.3        | 93.5      | 97.2       | 98.0       | 88.4      |
| 1915.....        | 107.8     | 129.9      | 133.6  | 131.7  | 139.6 | 131.5 | 102.8 | 106.5    | 95.0        | 90.9      | 98.1       | 91.9       | 105.2     |
| 1916.....        | 102.8     | 113.9      | 102.9  | 98.6   | 102.5 | 100.0 | 93.0  | 107.1    | 131.2       | 136.3     | 158.4      | 160.3      | 125.9     |
| 1917.....        | 150.3     | 164.8      | 164.4  | 180.0  | 245.9 | 248.5 | 220.1 | 228.9    | 209.7       | 200.6     | 200.0      | 200.8      | 200.8     |
| 1918.....        | 201.9     | 201.2      | 202.7  | 202.6  | 203.6 | 202.5 | 203.2 | 204.5    | 205.6       | 205.8     | 206.0      | 204.2      | 204.3     |
| 1919.....        | 204.8     | 207.5      | 208.0  | 214.2  | 231.1 | 223.4 | 222.0 | 217.2    | 208.7       | 209.6     | 213.2      | 214.9      | 212.7     |
| 1920.....        | 231.8     | 235.7      | 226.0  | 234.0  | 251.3 | 253.6 | 232.2 | 218.7    | 214.3       | 188.0     | 143.7      | 217.2      | 217.2     |
| 1921.....        | 149.2     | 149.3      | 147.2  | 133.5  | 110.7 | 127.4 | 112.2 | 104.8    | 101.2       | 105.6     | 94.2       | 92.7       | 112.7     |
| Aver. 1912–1921. | 139.4     | 145.4      | 144.0  | 145.0  | 154.9 | 156.0 | 146.4 | 144.4    | 142.3       | 141.8     | 141.1      | 136.3      | 143.8     |

TABLE 32.—Wheat: *Monthly marketings by farmers, 1916–1921.*

| Month.         | Estimated amount sold monthly by farmers of United States (millions of bushels). |         |         |         |         |             | Per cent of year's sales. |         |         |         |         |             |
|----------------|--|---------|---------|---------|---------|-------------|---------------------------|---------|---------|---------|---------|-------------|
|                | 1916–17  | 1917–18 | 1918–19 | 1919–20 | 1920–21 | 5-yr. aver. | 1916–17                   | 1917–18 | 1918–19 | 1919–20 | 1920–21 | 5-yr. aver. |
| July.....      | 83   | 41      | 136     | 137     | 82      | 96          | 13.3                      | 7.4     | 17.6    | 17.1    | 12.1    | 13.5        |
| August.....    | 111  | 99      | 154     | 186     | 97      | 123         | 17.9                      | 12.4    | 19.9    | 23.2    | 14.3    | 17.5        |
| September..... | 104  | 108     | 139     | 125     | 108     | 117         | 15.8                      | 19.8    | 18.0    | 15.6    | 15.9    | 17.1        |
| October.....   | 87   | 101     | 107     | 89      | 72      | 91          | 12.1                      | 18.0    | 13.8    | 11.1    | 10.6    | 13.5        |
| November.....  | 60   | 77      | 67      | 60      | 47      | 62          | 9.7                       | 13.7    | 8.7     | 7.5     | 6.9     | 9.8         |
| December.....  | 35   | 43      | 56      | 45      | 42      | 44          | 5.6                       | 7.6     | 7.8     | 5.7     | 6.2     | 6.5         |
| January.....   | 45   | 26      | 36      | 34      | 38      | 36          | 7.2                       | 4.7     | 4.6     | 4.2     | 5.5     | 5.2         |
| February.....  | 20   | 22      | 24      | 24      | 36      | 25          | 3.3                       | 3.9     | 3.1     | 3.0     | 5.3     | 3.7         |
| March.....     | 24   | 21      | 16      | 23      | 33      | 23          | 3.9                       | 3.7     | 2.0     | 2.9     | 4.9     | 3.5         |
| April.....     | 19   | 28      | 13      | 25      | 34      | 28          | 3.1                       | 4.1     | 1.6     | 3.1     | 5.0     | 3.4         |
| May.....       | 19   | 17      | 15      | 27      | 44      | 24          | 3.0                       | 3.1     | 1.9     | 3.4     | 6.4     | 3.6         |
| June.....      | 13   | 12      | 12      | 25      | 47      | 22          | 2.1                       | 2.1     | 1.5     | 3.2     | 6.9     | 2.2         |
| Season.....    | 620  | 560     | 775     | 800     | 680     | 686         | 100.0                     | 100.0   | 100.0   | 100.0   | 100.0   | 100.0       |

## WHEAT—Continued.

TABLE 33.—Spring wheat varieties: Production in principal States, 1914–1921.

The bulk of the spring wheat crop is produced in the four States of Minnesota, North and South Dakota, and Montana. The five leading varieties of spring wheat in these States have made interesting shifts in relative importance in the past seven years. Marquis was least important in 1914, but by 1918 it had jumped into first place, which it has held since, although its peak of popularity seems to have been reached in 1919, when it comprised 57.6 per cent of all the spring wheat raised in these four States as compared with 57 per cent in 1920. Durum wheat is the only one of the leading varieties that gained, relatively, in 1921. This variety has been gaining, relatively, steadily since 1914. It is the heaviest yielder in bushels per acre. Velvet chaff, blue stem, and fife have each lost in relative importance each year since 1916. Comparative figures are given below.

## PER CENT OF STATE TOTAL, AND YIELD PER ACRE.

| State and year.      | Marquis. |       | Velvet chaff. |       | Blue stem. |       | Durum. |       | Fife.  |       | Other. |       |
|----------------------|----------|-------|---------------|-------|------------|-------|--------|-------|--------|-------|--------|-------|
|                      | P. ct.   | Bu.   | P. ct.        | Bu.   | P. ct.     | Bu.   | P. ct. | Bu.   | P. ct. | Bu.   | P. ct. | Bu.   |
| <b>Minnesota:</b>    |          |       |               |       |            |       |        |       |        |       |        |       |
| 1921.....            | 74.8     | 9.6   | 9.8           | 8.5   | 4.9        | 8.0   | 8.1    | 11.9  | 1.3    | 9.1   | 1.1    | 10.3  |
| 1920.....            | 72.3     | 9.8   | 14.4          | 8.1   | 6.0        | 7.9   | 5.2    | 12.0  | 1.2    | 9.6   | .9     | 10.8  |
| 1919.....            | 67.8     | 9.7   | 17.8          | 8.3   | 7.9        | 7.8   | 4.3    | 11.9  | 1.4    | 8.8   | .8     | 9.5   |
| 1918.....            | 59.7     | 22.4  | 22.4          | 19.0  | 11.8       | 17.0  | 3.3    | 20.0  | 1.6    | 17.6  | 1.2    | 18.0  |
| 1917.....            | 47.4     | 17.2  | 26.8          | 16.0  | 18.6       | 14.0  | 3.1    | 15.5  | 3.1    | 15.0  | 1.0    | 14.0  |
| 1916.....            | 31.7     | 11.0  | 29.9          | 7.4   | 31.9       | 5.5   | 2.3    | 8.5   | 3.9    | 6.9   | .3     | ..... |
| 1914.....            | 3.1      | 12.8  | 30.6          | 11.6  | 53.1       | 9.8   | 2.0    | 12.3  | 7.1    | 10.3  | 4.1    | 11.0  |
| <b>North Dakota:</b> |          |       |               |       |            |       |        |       |        |       |        |       |
| 1921.....            | 41.7     | 7.4   | 5.0           | 7.4   | 2.8        | 6.8   | 45.5   | 9.7   | 3.1    | 7.7   | 1.9    | 10.1  |
| 1920.....            | 46.7     | 8.5   | 8.1           | 7.4   | 3.9        | 7.2   | 36.4   | 10.5  | 3.3    | 8.8   | 1.6    | 11.6  |
| 1919.....            | 47.6     | 6.6   | 8.0           | 6.8   | 5.0        | 5.3   | 34.6   | 7.9   | 4.3    | 5.8   | .6     | 7.8   |
| 1918.....            | 47.2     | 13.2  | 9.1           | 12.0  | 7.0        | 11.0  | 29.2   | 14.0  | 6.0    | 11.0  | 1.5    | 12.0  |
| 1917.....            | 43.4     | 8.0   | 10.1          | 7.5   | 12.1       | 7.2   | 25.3   | 9.0   | 8.1    | 7.0   | 1.0    | 6.8   |
| 1916.....            | 38.5     | 6.0   | 12.2          | 5.2   | 14.2       | 3.8   | 18.6   | 7.3   | 16.0   | 4.5   | .5     | 5.0   |
| 1914.....            | 5.0      | 14.9  | 11.6          | 12.1  | 44.6       | 10.3  | 12.7   | 13.9  | 21.5   | 10.9  | 4.6    | 10.8  |
| <b>South Dakota:</b> |          |       |               |       |            |       |        |       |        |       |        |       |
| 1921.....            | 49.9     | 8.0   | 4.3           | 7.1   | 1.2        | 7.1   | 42.4   | 11.0  | .8     | 7.4   | 1.4    | 11.0  |
| 1920.....            | 61.9     | 8.2   | 6.3           | 7.3   | 1.9        | 8.1   | 28.0   | 12.4  | .6     | 9.2   | 1.2    | 11.5  |
| 1919.....            | 63.8     | 7.6   | 3.4           | 7.4   | 3.1        | 6.7   | 22.7   | 9.8   | 1.0    | 7.1   | 1.0    | 8.8   |
| 1918.....            | 59.6     | 19.3  | 12.5          | 17.0  | 5.5        | 15.4  | 20.4   | 19.5  | 1.6    | 16.0  | .4     | 16.5  |
| 1917.....            | 44.3     | 15.3  | 20.6          | 13.1  | 11.4       | 11.1  | 20.6   | 15.6  | 3.1    | 10.0  | .....  | ..... |
| 1916.....            | 25.4     | 7.9   | 32.1          | 6.2   | 25.8       | 5.0   | 13.6   | 8.2   | 2.9    | 5.0   | .2     | ..... |
| 1914.....            | 3.1      | 11.2  | 32.0          | 9.3   | 30.9       | 7.5   | 21.7   | 11.2  | 11.8   | 9.3   | 1.0    | 8.7   |
| <b>Montana:</b>      |          |       |               |       |            |       |        |       |        |       |        |       |
| 1921.....            | 71.0     | 12.2  | 3.2           | 11.3  | 3.7        | 12.6  | 15.5   | 11.2  | 2.9    | 12.2  | 3.7    | 12.4  |
| 1920.....            | 66.8     | 10.8  | 2.5           | 10.4  | 5.0        | 10.7  | 17.8   | 11.5  | 3.1    | 10.7  | 4.7    | 12.2  |
| 1919.....            | 71.4     | 4.8   | 4.3           | 5.4   | 4.6        | 5.8   | 13.3   | 4.5   | 3.9    | 4.3   | 2.5    | 4.4   |
| 1918.....            | 66.2     | 13.0  | 2.8           | 12.7  | 5.6        | 10.5  | 21.2   | 12.9  | 2.8    | 10.8  | 1.4    | 13.3  |
| 1917.....            | 75.0     | 9.3   | 1.7           | 7.5   | 5.0        | 6.5   | 13.3   | 9.0   | 3.3    | 7.5   | 1.7    | 7.5   |
| <b>Four States:</b>  |          |       |               |       |            |       |        |       |        |       |        |       |
| 1921.....            | 53.3     | ..... | 5.3           | ..... | 3.0        | ..... | 34.0   | ..... | 2.4    | ..... | 2.0    | ..... |
| 1920.....            | 56.6     | ..... | 8.0           | ..... | 4.1        | ..... | 26.9   | ..... | 2.5    | ..... | 1.9    | ..... |
| 1919.....            | 57.6     | ..... | 10.4          | ..... | 5.3        | ..... | 23.0   | ..... | 2.8    | ..... | .9     | ..... |
| 1918.....            | 55.2     | ..... | 13.1          | ..... | 7.9        | ..... | 19.2   | ..... | 3.5    | ..... | 1.1    | ..... |
| 1917.....            | 46.9     | ..... | 17.6          | ..... | 13.6       | ..... | 16.2   | ..... | 4.9    | ..... | .8     | ..... |

## PRODUCTION IN BUSHELS.

| Minnesota:           | Bush.  | Bush.  | Bush.  | Bush.  | Bush.  | Bush. |
|----------------------|--------|--------|--------|--------|--------|-------|
| 1921.....            | 17,694 | 2,318  | 1,159  | 1,916  | 308    | 260   |
| 1920.....            | 19,232 | 3,830  | 1,596  | 1,383  | 419    | 240   |
| 1919.....            | 23,412 | 6,147  | 2,728  | 1,485  | 313    | 276   |
| 1918.....            | 44,506 | 16,099 | 2,797  | 2,400  | 1,193  | 895   |
| 1917.....            | 23,807 | 13,460 | 9,342  | 1,557  | 1,557  | 502   |
| 1916.....            | 8,084  | 7,025  | 8,135  | 586    | 994    | 76    |
| 1914.....            | 1,302  | 12,852 | 22,302 | 840    | 2,982  | 1,722 |
| <b>North Dakota:</b> |        |        |        |        |        |       |
| 1921.....            | 30,551 | 3,663  | 2,051  | 33,336 | 2,271  | 1,392 |
| 1920.....            | 37,474 | 6,500  | 3,129  | 29,209 | 2,648  | 1,284 |
| 1919.....            | 29,819 | 5,022  | 3,139  | 21,720 | 2,699  | 1,377 |
| 1918.....            | 49,877 | 9,616  | 7,897  | 30,856 | 6,341  | 1,585 |
| 1917.....            | 24,304 | 5,658  | 6,776  | 14,168 | 4,536  | 1,860 |
| 1916.....            | 15,140 | 4,798  | 5,684  | 7,314  | 6,292  | 1,977 |
| 1914.....            | 4,111  | 9,425  | 36,395 | 10,389 | 17,549 | 3,723 |
| <b>South Dakota:</b> |        |        |        |        |        |       |
| 1921.....            | 12,441 | 1,072  | 289    | 10,570 | 199    | 349   |
| 1920.....            | 15,766 | 1,605  | 484    | 7,131  | 153    | 331   |
| 1919.....            | 19,247 | 2,534  | 935    | 6,848  | 302    | 302   |
| 1918.....            | 36,237 | 7,600  | 3,344  | 12,403 | 973    | 243   |
| 1917.....            | 19,226 | 8,940  | 4,948  | 8,941  | 1,345  | 0     |
| 1916.....            | 5,601  | 7,078  | 5,689  | 2,990  | 639    | 44    |
| 1914.....            | 900    | 9,888  | 9,382  | 6,724  | 2,601  | 100   |

## WHEAT—Continued.

TABLE 33.—Spring wheat varieties: Production in principal States, 1914-1921—Con.

PRODUCTION IN BUSHELS—Continued.

| State and year. | Marquis.     | Velvet chaff. | Blue stem.   | Durum.       | Fife.        | Other.       |
|-----------------|--------------|---------------|--------------|--------------|--------------|--------------|
|                 | <i>Bush.</i> | <i>Bush.</i>  | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> | <i>Bush.</i> |
| Montana:        |              |               |              |              |              |              |
| 1921.....       | 16,997       | 766           | 896          | 3,711        | 894          | 886          |
| 1920.....       | 15,878       | 594           | 1,189        | 4,231        | 737          | 1,141        |
| 1919.....       | 5,063        | 305           | 326          | 943          | 277          | 177          |
| 1918.....       | 14,101       | 596           | 1,193        | 4,516        | 596          | 298          |
| 1917.....       | 7,573        | 172           | 505          | 1,343        | 333          | 172          |
| Four states:    |              |               |              |              |              |              |
| 1921.....       | 77,683       | 7,819         | 4,395        | 49,533       | 3,472        | 2,887        |
| 1920.....       | 88,350       | 12,529        | 8,398        | 41,954       | 3,857        | 2,996        |
| 1919.....       | 77,541       | 14,008        | 7,128        | 30,906       | 3,781        | 1,132        |
| 1918.....       | 144,721      | 34,511        | 20,731       | 60,235       | 9,103        | 3,021        |
| 1917.....       | 74,910       | 28,228        | 21,871       | 26,009       | 7,771        | 1,234        |

TABLE 34.—Wheat: Monthly and yearly average price per bushel of reported sales, 1910-1911 to 1921-1922.

No. 2 RED WINTER, CHICAGO.<sup>1</sup>

| Crop year.        | July.  | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | Weighted average. |
|-------------------|--------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|-------------------|
| 1910-11.....      | \$1.07 | \$1.02  | \$0.99     | \$0.96   | \$0.93    | \$0.94    | \$0.93   | \$0.91    | \$0.90 | \$0.90 | \$0.95 | \$0.91 | \$1.02            |
| 1911-12.....      | .86    | .90     | .93        | 1.00     | .96       | .96       | .97      | 1.01      | 1.03   | 1.09   | 1.16   | 1.10   | .90               |
| 1912-13.....      | 1.05   | 1.03    | 1.03       | 1.06     | .99       | .86       | 1.09     | .99       | .85    | 1.02   | 1.03   | 1.00   | 1.03              |
| 1913-14.....      | .87    | .89     | .93        | .92      | .92       | .91       | .97      | .97       | .95    | .95    | .99    | .82    | .88               |
| 1914-15.....      | .82    | .92     | 1.11       | 1.12     | 1.15      | 1.20      | 1.39     | 1.57      | 1.52   | 1.59   | 1.55   | 1.24   | 1.07              |
| 1915-16.....      | 1.13   | 1.11    | 1.08       | 1.12     | 1.12      | 1.23      | 1.30     | 1.23      | 1.13   | 1.22   | 1.15   | 1.05   | 1.13              |
| 1916-17.....      | 1.23   | 1.43    | 1.53       | 1.66     | 1.85      | 1.76      | 1.89     | 1.74      | 1.99   | 2.43   | 2.94   | 2.76   | 1.68              |
| 1917-18.....      | 2.50   | 2.30    | 2.17       | 2.17     | 2.17      | 2.17      | 2.17     | 2.17      | 2.17   | 2.17   | 2.16   | 2.17   | 2.25              |
| 1918-19.....      | 2.22   | 2.21    | 2.23       | 2.25     | 2.24      | 2.29      | 2.34     | 2.28      | 2.36   | 2.52   | 2.76   | 2.32   | 2.22              |
| 1919-20.....      | 2.23   | 2.24    | 2.24       | 2.24     | 2.29      | 2.44      | 2.64     | 2.42      | 2.55   | 2.63   | 3.10   | 2.89   | 2.24              |
| 1920-21.....      | 2.59   | 2.50    | 2.53       | 2.20     | 2.01      | 2.02      | 1.94     | 1.85      | 1.65   | 1.41   | 1.67   | 1.47   | 2.22              |
| 1921-22.....      | 1.24   | 1.22    | 1.29       | 1.18     | 1.23      | 1.18      | .....    | .....     | .....  | .....  | .....  | .....  | .....             |
| 11 year average.. | 1.51   | 1.50    | 1.52       | 1.52     | 1.51      | 1.53      | 1.61     | 1.56      | 1.56   | 1.63   | 1.68   | 1.61   | 1.51              |

No. 1 NORTHERN SPRING, MINNEAPOLIS.<sup>2</sup>

| Crop year.        | July.  | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | Weighted average. |
|-------------------|--------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|-------------------|
| 1910-11.....      | \$1.21 | \$1.13  | \$1.09     | \$1.08   | \$1.04    | \$1.03    | \$1.06   | \$1.02    | \$0.98 | \$0.96 | \$0.99 | \$0.97 | \$1.05            |
| 1911-12.....      | .89    | 1.05    | 1.09       | 1.10     | 1.05      | 1.02      | 1.06     | 1.06      | 1.08   | 1.10   | 1.14   | 1.13   | 1.07              |
| 1912-13.....      | 1.09   | .98     | .89        | .90      | .84       | .82       | .89      | .87       | .85    | .88    | .91    | .92    | .87               |
| 1913-14.....      | .91    | .88     | .87        | .81      | .85       | .86       | .87      | .93       | .92    | .91    | .94    | .92    | .88               |
| 1914-15.....      | .92    | 1.10    | 1.12       | 1.11     | 1.18      | 1.20      | 1.38     | 1.62      | 1.49   | 1.58   | 1.58   | 1.35   | 1.20              |
| 1915-16.....      | 1.44   | 1.18    | .97        | 1.02     | 1.02      | 1.14      | 1.29     | 1.26      | 1.14   | 1.22   | 1.22   | 1.11   | 1.09              |
| 1916-17.....      | 1.21   | 1.64    | 1.64       | 1.79     | 1.95      | 1.79      | 1.93     | 1.86      | 2.03   | 2.38   | 2.94   | 2.73   | 1.76              |
| 1917-18.....      | 2.66   | 2.47    | 2.17       | 2.17     | 2.17      | 2.17      | 2.17     | 2.17      | 2.17   | 2.17   | 2.17   | 2.17   | 2.20              |
| 1918-19.....      | 2.17   | 2.23    | 2.23       | 2.19     | 2.22      | 2.22      | 2.21     | 2.24      | 2.36   | 2.56   | 2.59   | 2.48   | 2.25              |
| 1919-20.....      | 2.66   | 2.59    | 2.56       | 2.67     | 2.85      | 3.07      | 3.01     | 2.67      | 2.84   | 3.06   | 3.09   | 2.93   | 2.72              |
| 1920-21.....      | 2.89   | 2.56    | 2.54       | 2.16     | 1.80      | 1.68      | 1.79     | 1.72      | 1.66   | 1.53   | 1.55   | 1.69   | 2.07              |
| 1921-22.....      | 1.67   | 1.43    | 1.51       | 1.34     | 1.25      | 1.30      | .....    | .....     | .....  | .....  | .....  | .....  | .....             |
| 11 year average.. | 1.64   | 1.62    | 1.56       | 1.55     | 1.54      | 1.55      | 1.61     | 1.57      | 1.59   | 1.67   | 1.74   | 1.67   | 1.58              |

<sup>1</sup> Compiled from the Chicago Daily Trade Bulletin.<sup>2</sup> Based on small number of sales.<sup>3</sup> Compiled from Minneapolis Market Record.



## WHEAT—Continued.

TABLE 34.—Wheat: Monthly and yearly average price per bushel of reported sales, 1910-1911 to 1921-1922—Continued.

No. 1 DARK NORTHERN SPRING, MINNEAPOLIS.<sup>1</sup>

| Crop year.   | July.  | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | Weighted average. |
|--------------|--------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|-------------------|
| 1917-18..... | .....  | \$2.50  | \$2.21     | \$2.21   | \$2.21    | \$2.21    | \$2.21   | \$2.21    | \$2.21 | \$2.21 | \$2.21 | \$2.21 | \$2.23            |
| 1918-19..... | \$2.21 | 2.29    | 2.24       | 2.23     | 2.25      | 2.25      | 2.25     | 2.29      | 2.41   | 2.63   | 2.68   | 2.56   | 2.36              |
| 1919-20..... | 2.72   | 2.71    | 2.77       | 2.84     | 3.00      | 3.25      | 3.34     | 2.90      | 2.97   | 3.23   | 3.26   | 3.01   | 3.00              |
| 1920-21..... | 2.94   | 2.69    | 2.65       | 2.21     | 1.83      | 1.72      | 1.81     | 1.74      | 1.72   | 1.67   | 1.67   | 1.74   | 2.02              |
| 1921-22..... | 1.81   | 1.57    | 1.56       | 1.37     | 1.30      | 1.33      | .....    | .....     | .....  | .....  | .....  | .....  | .....             |

No. 2 HARD WINTER, KANSAS CITY.<sup>4</sup>

|                   |        |        |        |        |        |        |        |        |        |        |        |                  |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------|--------|
| 1910-11.....      | \$1.01 | \$1.00 | \$0.99 | \$0.95 | \$0.91 | \$0.93 | \$0.95 | \$0.90 | \$0.88 | \$0.88 | \$0.90 | \$0.88           | \$0.98 |
| 1911-12.....      | .87    | .93    | .95    | 1.04   | 1.00   | 1.00   | 1.05   | 1.03   | 1.05   | 1.09   | 1.11   | 1.09             | .97    |
| 1912-13.....      | .92    | .89    | .88    | .88    | .83    | .84    | .87    | .86    | .88    | .88    | .87    | .88              | .88    |
| 1913-14.....      | .82    | .83    | .87    | .81    | .83    | .84    | .85    | .86    | .88    | .87    | .90    | .85              | .84    |
| 1914-15.....      | .78    | .91    | 1.01   | 1.02   | 1.08   | 1.13   | 1.34   | 1.54   | 1.49   | 1.54   | 1.50   | 1.21             | .98    |
| 1915-16.....      | 1.36   | 1.26   | 1.07   | 1.07   | 1.03   | 1.12   | 1.20   | 1.20   | 1.05   | 1.12   | 1.10   | 1.00             | 1.19   |
| 1916-17.....      | 1.14   | 1.41   | 1.57   | 1.67   | 1.85   | 1.72   | 1.89   | 1.82   | 1.97   | 2.43   | 3.01   | 2.74             | 1.71   |
| 1917-18.....      | 2.68   | 2.61   | 2.12   | 2.12   | 2.12   | 2.12   | 2.12   | 2.12   | 2.12   | 2.12   | 2.12   | ( <sup>5</sup> ) | 2.52   |
| 1918-19.....      | 2.20   | 2.16   | 2.12   | 2.16   | 2.15   | 2.24   | 2.31   | 2.26   | 2.39   | 2.62   | 2.60   | 2.47             | 2.19   |
| 1919-20.....      | 2.25   | 2.18   | 2.24   | 2.30   | 2.46   | 2.63   | 2.82   | 2.42   | 2.49   | 2.75   | 2.93   | 2.76             | 2.42   |
| 1920-21.....      | 2.67   | 2.44   | 2.43   | 2.08   | 1.78   | 1.71   | 1.72   | 1.62   | 1.55   | 1.33   | 1.47   | 1.38             | 1.83   |
| 1921-22.....      | 1.14   | 1.15   | 1.22   | 1.10   | 1.10   | 1.09   | .....  | .....  | .....  | .....  | .....  | .....            | .....  |
| 11 year average.. | 1.53   | 1.51   | 1.48   | 1.46   | 1.46   | 1.48   | 1.56   | 1.51   | 1.52   | 1.60   | 1.68   | 1.39             | 1.50   |

No. 2 RED WINTER, ST. LOUIS.<sup>4</sup>

|                   |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910-11.....      | \$1.07 | \$1.02 | \$1.02 | \$1.00 | \$0.96 | \$0.98 | \$1.03 | \$0.96 | \$0.98 | \$0.90 | \$0.94 | \$0.88 | \$0.99 |
| 1911-12.....      | .84    | .88    | .94    | 1.00   | .96    | .97    | 1.02   | 1.01   | 1.04   | 1.13   | 1.21   | 1.11   | .94    |
| 1912-13.....      | 1.03   | 1.04   | 1.03   | 1.09   | 1.04   | 1.07   | 1.11   | 1.09   | 1.08   | 1.09   | 1.04   | .99    | 1.05   |
| 1913-14.....      | .85    | .88    | .94    | .93    | .94    | .95    | .98    | .95    | .95    | .94    | .96    | .81    | .89    |
| 1914-15.....      | .87    | .93    | 1.10   | 1.10   | 1.11   | 1.18   | 1.40   | 1.57   | 1.50   | 1.54   | 1.50   | 1.19   | 1.10   |
| 1915-16.....      | 1.17   | 1.14   | 1.14   | 1.21   | 1.16   | 1.23   | 1.34   | 1.30   | 1.17   | 1.22   | 1.20   | 1.10   | 1.20   |
| 1916-17.....      | 1.25   | 1.45   | 1.60   | 1.73   | 1.87   | 1.83   | 1.96   | 1.88   | 2.05   | 2.66   | 3.04   | 2.65   | 1.63   |
| 1917-18.....      | 2.36   | 2.32   | 2.15   | 2.15   | 2.15   | 2.15   | 2.15   | 2.15   | 2.15   | 2.15   | 2.15   | 2.15   | 2.23   |
| 1918-19.....      | 2.21   | 2.21   | 2.19   | 2.22   | 2.22   | 2.32   | 2.41   | 2.38   | 2.55   | 2.71   | 2.60   | 2.41   | 2.23   |
| 1919-20.....      | 2.22   | 2.20   | 2.21   | 2.24   | 2.29   | 2.48   | 2.70   | 2.55   | 2.58   | 2.76   | 2.99   | 2.89   | 2.50   |
| 1920-21.....      | 2.70   | 2.47   | 2.66   | 2.25   | 2.03   | 1.99   | 2.02   | 1.90   | 1.66   | 1.41   | 1.53   | 1.50   | 2.18   |
| 1921-22.....      | 1.23   | 1.23   | 1.38   | 1.28   | 1.20   | 1.21   | .....  | .....  | .....  | .....  | .....  | .....  | .....  |
| 11 year average.. | 1.51   | 1.50   | 1.53   | 1.54   | 1.52   | 1.56   | 1.65   | 1.61   | 1.61   | 1.68   | 1.75   | 1.61   | 1.52   |

<sup>1</sup> Compiled from Minneapolis Market Record.<sup>4</sup> Compiled from Kansas City Price Current.<sup>5</sup> No sales.<sup>2</sup> Compiled from St. Louis Daily Market Reporter.

WHEAT—Continued.

TABLE 35.—Wheat flour: Wholesale price per barrel, 1921–1913.

| Date.     | Chicago.        |        |        |                 |        |        | Cincinnati.     |        |        | New York.       |        |        | St. Louis.      |        |        |
|-----------|-----------------|--------|--------|-----------------|--------|--------|-----------------|--------|--------|-----------------|--------|--------|-----------------|--------|--------|
|           | Winter patents. |        |        | Spring patents. |        |        | Winter patents. |        |        | Spring patents. |        |        | Winter patents. |        |        |
|           | Low.            | High.  | Aver.  | Low.            | High.  | Aver.  | Low.            | High.  | Aver.  | Low.            | High.  | Aver.  | Low.            | High.  | Aver.  |
| 1921.     | Dolls.          | Dolls. | Dolls. | Dolls.          | Dolls. | Dolls. | Dolls.          | Dolls. | Dolls. | Dolls.          | Dolls. | Dolls. | Dolls.          | Dolls. | Dolls. |
| Jan.....  | 8.00            | 9.75   | 9.00   | 8.40            | 9.50   | 9.06   | 9.50            | 11.25  | 10.20  | 9.00            | 10.25  | 9.61   | 8.65            | 11.50  | 9.79   |
| Feb.....  | 8.10            | 9.40   | 8.81   | 8.20            | 9.50   | 8.94   | 9.15            | 10.00  | 9.71   | 8.25            | 9.50   | 8.98   | 8.50            | 11.00  | 9.86   |
| Mar.....  | 7.75            | 8.85   | 8.39   | 8.15            | 9.25   | 8.64   | 8.25            | 9.65   | 8.85   | 8.15            | 9.50   | 8.80   | 7.50            | 10.50  | 8.66   |
| Apr.....  | 7.45            | 7.90   | 7.69   | 8.10            | 8.55   | 8.28   | 7.75            | 8.65   | 8.05   | 7.35            | 9.00   | 8.11   | 6.50            | 8.00   | 7.08   |
| May.....  | 7.60            | 8.70   | 8.28   | 8.15            | 9.00   | 8.69   | 7.50            | 8.80   | 8.31   | 7.75            | 9.50   | 8.68   | 6.50            | 8.50   | 7.72   |
| June..... | 8.10            | 9.35   | 8.59   | 8.50            | 9.50   | 8.96   | 7.75            | 9.00   | 8.38   | 8.25            | 9.75   | 9.06   | 6.50            | 9.50   | 7.74   |
| July..... | 6.90            | 8.00   | 7.41   | 8.25            | 9.00   | 8.82   | 6.50            | 8.00   | 7.17   | 8.25            | 10.00  | 9.03   | 6.00            | 7.00   | 6.57   |
| Aug.....  | 6.30            | 7.10   | 6.77   | 7.65            | 8.75   | 8.24   | 6.25            | 7.25   | 6.81   | 7.75            | 9.50   | 8.49   | 6.15            | 7.00   | 6.62   |
| Sept..... | 6.80            | 7.40   | 7.07   | 7.05            | 8.10   | 7.70   | 6.25            | 7.35   | 6.78   | 7.85            | 8.75   | 8.30   | 6.25            | 7.50   | 6.97   |
| Oct.....  | 6.10            | 6.70   | 6.30   | 6.90            | 7.70   | 7.17   | 5.75            | 6.75   | 6.28   | 6.75            | 8.40   | 7.52   | 5.50            | 7.50   | 6.51   |
| Nov.....  | 5.80            | 6.40   | 6.14   | 6.55            | 7.10   | 6.89   | 6.25            | 6.75   | 6.00   | 6.75            | 7.50   | 6.94   | 5.75            | 6.75   | 6.25   |
| Dec.....  | 6.00            | 6.35   | 6.14   | 6.60            | 7.10   | 6.76   | 6.25            | 6.75   | 6.50   | 6.50            | 7.50   | 6.95   | 5.75            | 6.75   | 6.25   |
|           | 5.80            | 9.75   | 7.55   | 6.55            | 9.60   | 8.18   | 5.75            | 11.25  | 7.80   | 6.50            | 10.25  | 8.37   | 5.50            | 11.50  | 7.50   |
| 1920..... | 7.30            | 14.25  | 10.72  | 7.90            | 15.60  | 12.72  | 10.75           | 15.00  | 12.52  | 8.25            | 15.75  | 12.82  | 8.50            | 15.00  | 11.77  |
| 1919..... | 9.30            | 13.00  | 11.12  | 10.00           | 15.00  | 14.50  | 10.50           | 13.25  | 11.42  | 10.35           | 15.00  | 12.28  | 9.40            | 12.65  | 10.60  |
| 1918..... | 9.80            | 11.25  | 10.62  | 9.80            | 11.75  | 11.08  | 10.35           | 11.35  | 10.94  | 10.50           | 11.95  | 10.96  | 8.59            | 12.50  | 10.22  |
| 1917..... | 8.10            | 17.00  | .....  | 8.20            | 17.80  | .....  | 7.25            | 18.25  | .....  | 8.05            | 16.75  | .....  | 7.90            | 15.25  | .....  |
| 1916..... | 5.00            | 8.65   | .....  | 5.00            | 9.75   | .....  | 4.50            | 8.75   | .....  | 5.45            | 10.00  | .....  | 4.75            | 9.00   | .....  |
| 1915..... | 4.50            | 7.80   | .....  | 4.50            | 6.90   | .....  | 4.65            | 6.65   | .....  | 4.90            | 8.25   | .....  | 4.60            | 7.50   | .....  |
| 1914..... | 3.45            | 5.50   | .....  | 4.00            | 6.90   | .....  | 3.05            | 4.90   | .....  | 4.35            | 7.00   | .....  | 3.35            | 5.70   | .....  |
| 1913..... | 3.90            | 5.10   | .....  | 4.00            | 5.60   | .....  | 2.90            | 4.15   | .....  | 4.40            | 5.00   | .....  | 3.70            | 5.15   | .....  |

## WHEAT—Continued.

TABLE 36.—Wheat: Monthly and yearly receipts and shipments, 11 primary markets, 1910-11 to 1921-22.<sup>1</sup>

[In thousands of bushels; i. e., 000 omitted.]

| Crop year.        | Chicago.  |            | Milwaukee. |            | Minneapolis. |            | Duluth.   |            | St. Louis. |            | Toledo.   |            | Detroit.  |            | Kansas City. |            | Peoria.   |            | Omaha.    |            | Indianapolis. |            | Total.    |            |
|-------------------|-----------|------------|------------|------------|--------------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|--------------|------------|-----------|------------|-----------|------------|---------------|------------|-----------|------------|
|                   | Receipts. | Shipments. | Receipts.  | Shipments. | Receipts.    | Shipments. | Receipts. | Shipments. | Receipts.  | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts.    | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts.     | Shipments. | Receipts. | Shipments. |
| 1910-11.....      | 27,400    | 17,239     | 10,092     | 7,875      | 90,774       | 30,996     | 28,322    | 127,220    | 682        | 4,122      | 1,556     | 2,003      | 105,40    | 537        | 26,709       | 1,225      | 1,074     | (2)        | (2)       | (2)        | (2)           | 224        | 878       | 120,983    |
| 1911-12.....      | 35,563    | 30,039     | 8,497      | 3,411      | 98,889       | 52,743     | 30,598    | 25,671     | 15,336     | 12,790     | 6,930     | 2,851      | 401,23    | 627        | 16,070       | 1,518      | 1,106     | 11         | 1,030     | 9,690      | 173           | 283        | 925       | 157,504    |
| 1912-13.....      | 44,168    | 43,325     | 10,339     | 6,685      | 123,161      | 32,761     | 83,550    | 75,792     | 27,179     | 4,734      | 2,475     | 871        | 715,48    | 374        | 33,415       | 1,951      | 616       | 20         | 193       | 13         | 1,560         | 463        | 380       | 709,266    |
| 1913-14.....      | 50,884    | 47,905     | 6,372      | 3,432      | 103,679      | 26,944     | 62,769    | 64,769     | 27,244     | 12,242     | 5,302     | 6,704      | 1,442     | 842        | 23,152       | 1,629      | 1,424     | 16         | 453       | 11         | 1,868         | 812        | 310       | 394,200    |
| 1914-15.....      | 107,718   | 91,112     | 9,550      | 7,010      | 112,710      | 32,510     | 62,268    | 59,867     | 94,196     | 26,913     | 7,089     | 2,763      | 2,012     | 77,745     | 64,650       | 3,798      | 3,527     | 17         | 767       | 11         | 3,028         | 916        | 498       | 626,311    |
| 1915-16.....      | 85,519    | 61,531     | 7,337      | 3,505      | 163,262      | 54,932     | 95,674    | 62,549     | 42,226     | 31,046     | 9,955     | 2,809      | 1,530     | 70,432     | 51,632       | 4,503      | 5,336     | 25         | 613       | 16         | 4,851         | 1,967      | 512       | 441,315    |
| 1916-17.....      | 56,708    | 47,342     | 10,595     | 8,069      | 119,701      | 39,698     | 30,978    | 36,769     | 41,024     | 33,080     | 6,719     | 2,724      | 1,082     | 86,720     | 62,878       | 2,870      | 2,468     | 31         | 194       | 26         | 2,890         | 922        | 373       | 123,264    |
| 1917-18.....      | 13,735    | 8,118      | 13,138     | 1,336      | 82,229       | 19,072     | 16,602    | 13,646     | 17,023     | 13,284     | 4,553     | 1,379      | 1,597     | 260        | 22,226       | 8,255      | 2,195     | 1,422      | 8,565     | 6,096      | 2,990         | 1,192      | 134       | 883        |
| 1918-19.....      | 54,533    | 67,122     | 15,535     | 12,575     | 117,787      | 38,174     | 58,393    | 36,932     | 42,547     | 25,621     | 5,940     | 1,948      | 1,608     | 306        | 54,106       | 35,696     | 3,405     | 3,371      | 19        | 730        | 15            | 1,115      | 2,080     | 410        |
| 1919-20.....      | 74,167    | 57,215     | 7,008      | 3,674      | 119,419      | 37,468     | 18,317    | 13,664     | 45,266     | 32,958     | 8,046     | 2,285      | 1,688     | 289        | 92,215       | 52,673     | 3,663     | 4,285      | 26        | 585        | 21            | 992        | 7,471     | 1,340      |
| 1920-21.....      | 30,615    | 27,866     | 4,523      | 2,556      | 115,579      | 30,724     | 46,083    | 46,272     | 45,316     | 31,479     | 5,652     | 1,400      | 1,656     | 149        | 87,148       | 64,637     | 2,199     | 2,011      | 28        | 192        | 24            | 372        | 4,491     | 535        |
| 11-year average.. | 52,946    | 45,347     | 9,350      | 5,379      | 113,740      | 37,721     | 51,169    | 47,968     | 33,554     | 25,147     | 6,180     | 2,829      | 2,012     | 704        | 56,117       | 40,477     | 2,631     | 2,513      | 20        | 532        | 15            | 943        | 3,583     | 1,035      |

| Month.         | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. |
|----------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| 1920.          |           |            |           |            |           |            |           |            |           |            |           |            |           |            |           |            |           |            |
| July.....      | 2,562     | 2,747      | 246       | 231        | 7,008     | 3,451      | 2,707     | 2,951      | 4,721     | 2,252      | 2,555     | 98         | 78        | 15         | 6,770     | 4,408      | 323       | 221        |
| August.....    | 3,920     | 3,464      | 292       | 268        | 8,087     | 2,802      | 1,211     | 1,384      | 5,755     | 3,168      | 762       | 61         | 96        | 21         | 8,522     | 2,482      | 722       | 33         |
| September..... | 3,950     | 3,243      | 357       | 293        | 12,068    | 2,221      | 6,650     | 5,625      | 4,508     | 3,579      | 461       | 70         | 138       | 39         | 4,226     | 2,728      | 1,514     | 144        |
| October.....   | 1,534     | 1,404      | 238       | 161        | 16,539    | 5,338      | 7,213     | 6,401      | 6,585     | 5,675      | 1,087     | 122        | 151       | 7          | 7,598     | 4,730      | 830       | 55         |
| November.....  | 1,262     | 1,045      | 204       | 106        | 14,471    | 4,837      | 6,204     | 5,321      | 5,763     | 4,763      | 641       | 265        | 152       | 5          | 6,868     | 4,300      | 830       | 45         |
| December.....  | 2,478     | 1,806      | 397       | 111        | 10,641    | 3,637      | 7,269     | 5,815      | 3,721     | 2,384      | 506       | 101        | 156       | 9          | 7,868     | 1,800      | 113       | 18         |
| 1921.          |           |            |           |            |           |            |           |            |           |            |           |            |           |            |           |            |           |            |
| January.....   | 1,193     | 1,415      | 249       | 114        | 9,411     | 4,309      | 2,090     | 1,610      | 4,407     | 3,085      | 171       | 128        | 190       | 17         | 10,096    | 6,764      | 166       | 6          |
| February.....  | 1,124     | 1,102      | 243       | 224        | 7,506     | 3,143      | 1,505     | 1,370      | 2,855     | 2,255      | 174       | 110        | 145       | 40         | 9,985     | 1,020      | 208       | 2          |
| March.....     | 2,218     | 1,484      | 268       | 188        | 7,292     | 4,328      | 887       | 488        | 2,668     | 2,011      | 205       | 51         | 125       | 11         | 5,755     | 5,322      | 202       | 14         |
| April.....     | 3,311     | 1,723      | 153       | 149        | 7,340     | 4,177      | 2,701     | 3,443      | 3,234     | 2,253      | 255       | 113        | 152       | 13         | 6,520     | 5,976      | 231       | 45         |
| May.....       | 1,906     | 1,754      | 621       | 443        | 6,325     | 2,941      | 1,594     | 2,327      | 2,828     | 1,920      | 284       | 114        | 115       | 6          | 7,216     | 5,321      | 45        | 44         |
| June.....      | 2,512     | 2,205      | 1,085     | 370        | 9,488     | 5,461      | 2,857     | 2,409      | 3,080     | 2,231      | 251       | 137        | 144       | 2          | 7,240     | 1,584      | 198       | 39         |
| July.....      | 14,070    | 3,621      | 1,442     | 949        | 7,043     | 3,938      | 2,233     | 2,607      | 8,923     | 3,622      | 943       | 91         | 169       | 378        | 5,520     | 2,674      | 1,700     | 347        |
| August.....    | 13,270    | 18,390     | 2,893     | 3,238      | 15,033    | 5,556      | 6,192     | 4,300      | 7,159     | 4,702      | 1,063     | 189        | 157       | 12         | 15,675    | 1,138      | 983       | 133        |
| September..... | 3,297     | 4,478      | 4,023     | 1,415      | 13,208    | 8,163      | 12,597    | 13,067     | 4,207     | 3,922      | 895       | 381        | 103       | 71         | 9,271     | 8,411      | 235       | 230        |
| October.....   | 1,656     | 1,895      | 515       | 356        | 16,668    | 5,570      | 8,705     | 7,748      | 3,589     | 2,234      | 656       | 235        | 139       | 10         | 7,434     | 6,547      | 93        | 62         |
| November.....  | 1,157     | 2,074      | 104       | 495        | 8,870     | 2,849      | 5,523     | 7,681      | 1,585     | 1,506      | 1,776     | 689        | 93        | 27         | 4,361     | 3,672      | 89        | 61         |
| December.....  | 1,795     | 2,700      | 103       | 83         | 8,180     | 2,264      | 2,831     | 3,097      | 1,705     | 1,302      | 470       | 478        | 129       | 23         | 6,288     | 3,243      | 59        | 24         |

\* No report.

From Chicago Daily Trade Bulletin and Board of Trade Reports.

## WHEAT—Continued.

TABLE 37.—Wheat: Visible supply in United States, first of each month, 1910–11 to 1921–22.<sup>1</sup>

[In thousands of bushels; i. e., 000 omitted.]

| Crop year.   | July.  | Aug.   | Sept.  | Oct.   | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.   | May.   | June.  |
|--------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|--------|--------|
| 1910–11..... | 12,034 | 12,375 | 26,452 | 34,967 | 40,120  | 42,989  | 44,282  | 43,251  | 39,868  | 34,152 | 27,605 | 26,838 |
| 1911–12..... | 23,833 | 41,310 | 48,057 | 52,709 | 65,199  | 69,948  | 70,489  | 60,425  | 57,080  | 51,042 | 41,722 | 30,847 |
| 1912–13..... | 23,350 | 18,841 | 19,586 | 31,658 | 41,712  | 55,400  | 65,342  | 64,913  | 63,786  | 58,996 | 47,157 | 37,940 |
| 1913–14..... | 30,163 | 37,677 | 44,530 | 49,026 | 53,105  | 58,868  | 63,743  | 60,806  | 57,021  | 51,862 | 43,378 | 29,775 |
| 1914–15..... | 14,999 | 29,744 | 31,534 | 51,586 | 65,922  | 74,086  | 72,861  | 60,252  | 49,682  | 39,323 | 26,439 | 19,082 |
| 1915–16..... | 7,948  | 6,532  | 7,111  | 15,900 | 22,639  | 43,797  | 67,311  | 68,458  | 63,553  | 57,357 | 43,864 | 44,463 |
| 1916–17..... | 42,628 | 40,839 | 64,660 | 57,418 | 60,470  | 62,020  | 59,534  | 48,721  | 44,616  | 39,317 | 25,766 | 23,896 |
| 1917–18..... | 14,209 | 5,819  | 5,058  | 7,789  | 14,908  | 21,031  | 17,552  | 13,898  | 9,739   | 5,381  | 2,194  | 1,146  |
| 1918–19..... | 785    | 17,155 | 48,821 | 96,886 | 122,804 | 121,561 | 119,711 | 130,613 | 118,219 | 92,546 | 49,502 | 23,702 |
| 1919–20..... | 8,681  | 20,903 | 56,828 | 84,909 | 98,352  | 89,742  | 75,263  | 60,359  | 50,875  | 45,896 | 42,784 | 37,101 |
| 1920–21..... | 17,777 | 17,487 | 19,554 | 27,361 | 35,500  | 43,149  | 43,063  | 32,558  | 27,822  | 18,463 | 13,468 | 8,334  |
| 1921–22..... | 8,061  | 24,658 | 38,741 | 52,795 | 56,595  | 47,763  |         |         |         |        |        |        |

<sup>1</sup> Compiled from Chicago Daily Trade Bulletin.TABLE 38.—Wheat: Yearly movements and local consumption at primary markets, 1910 to 1921.<sup>1</sup>

[In thousands of bushels; i. e., 000 omitted.]

## ALL PRIMARY MARKETS.

| Year.   | Supply at beginning of year. | Re-ceipts. | Ship-ments. | Supply at end of year. | Local con-sump-tion. | Year.   | Supply at beginning of year. | Re-ceipts. | Ship-ments. | Supply at end of year. | Local con-sump-tion. |
|---------|------------------------------|------------|-------------|------------------------|----------------------|---------|------------------------------|------------|-------------|------------------------|----------------------|
| 1910... | 12,034                       | 223,783    | 124,478     | 23,863                 | 86,478               | 1916... | 42,628                       | 374,754    | 266,500     | 14,209                 | 136,673              |
| 1911... | 23,863                       | 231,322    | 130,065     | 23,350                 | 101,780              | 1917... | 14,209                       | 177,551    | 90,717      | 785                    | 110,258              |
| 1912... | 23,350                       | 382,409    | 238,024     | 30,163                 | 137,672              | 1918... | 785                          | 439,088    | 285,874     | 8,681                  | 145,318              |
| 1913... | 30,163                       | 310,283    | 205,938     | 13,248                 | 121,260              | 1919... | 8,681                        | 402,643    | 227,729     | 19,799                 | 163,796              |
| 1914... | 13,248                       | 432,055    | 304,201     | 7,948                  | 133,154              | 1920... | 19,799                       | 401,076    | 222,806     | 11,621                 | 186,448              |
| 1915... | 7,948                        | 513,476    | 313,886     | 42,628                 | 164,910              | 1921... | 42,063                       | 416,179    | 293,406     | 49,468                 | 116,368              |

<sup>1</sup> Compiled from Chicago Daily Trade Bulletin.

TABLE 39.—Wheat: Summary in per cent of carloads graded by licensed inspectors for yearly periods, all inspection points. Total of all classes and subclasses under each grade.

1917–18 TO 1920–21.

| Crop year.   | Receipts.   |             |             |            |            |            | Shipments.  |             |             |            |            |            |
|--------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|------------|------------|------------|
|              | No. 1.      | No. 2.      | No. 3.      | No. 4.     | No. 5.     | S. G.      | No. 1.      | No. 2.      | No. 3.      | No. 4.     | No. 5.     | S. G.      |
| 1917–18..... | P. ct. 23.2 | P. ct. 34.4 | P. ct. 22.3 | P. ct. 8.9 | P. ct. 5.3 | P. ct. 5.9 | P. ct. 23.6 | P. ct. 34.2 | P. ct. 23.3 | P. ct. 8.5 | P. ct. 5.7 | P. ct. 4.7 |
| 1918–19..... | 48.2        | 32.7        | 10.2        | 4.3        | 1.6        | 3.0        | 69.1        | 24.0        | 8.9         | 1.2        | .4         | .8         |
| 1919–20..... | 7.5         | 31.8        | 31.0        | 16.7       | 8.2        | 4.8        | 8.8         | 61.7        | 31.7        | 6.8        | 2.3        | 1.7        |
| 1920–21..... | 28.3        | 36.8        | 18.9        | 7.6        | 5.8        | 7.6        | 11.8        | 70.8        | 11.3        | 2.4        | 2.2        | 2.0        |

## JULY, 1920, TO JUNE, 1921, BY CLASSES.

|                      |      |      |      |      |      |      |      |      |      |     |      |       |
|----------------------|------|------|------|------|------|------|------|------|------|-----|------|-------|
| Hard red spring..... | 33.4 | 13.0 | 18.5 | 12.8 | 13.3 | 9.5  | 26.6 | 25.6 | 24.6 | 7.4 | 10.3 | 5.5   |
| Durum.....           | 12.5 | 51.4 | 22.0 | 9.3  | 3.1  | 1.7  | .8   | 36.4 | 10.2 | 1.4 | .6   | .6    |
| Hard red winter..... | 23.0 | 41.4 | 18.4 | 5.5  | 4.8  | 6.9  | 9.3  | 77.4 | 9.5  | 1.4 | 1.1  | 1.3   |
| Soft red winter..... | 20.0 | 44.6 | 16.5 | 5.8  | 2.3  | 10.8 | 15.1 | 76.1 | 6.1  | .6  | .3   | 1.8   |
| Common white.....    | 7.9  | 52.5 | 22.7 | 10.8 | 3.2  | 3.4  | 8.5  | 76.0 | 8.4  | 3.5 | .6   | 2.4   |
| White club.....      | 13.1 | 42.9 | 33.3 | 8.0  | 1.4  | 1.3  | 10.5 | 79.3 | 9.5  | .5  | .2   | ..... |
| Mixed wheat.....     | 19.1 | 42.2 | 20.9 | 8.1  | 3.3  | 6.4  | 5.4  | 79.1 | 10.2 | 2.7 | 1.1  | 1.5   |

WHEAT—Continued.

TABLE 40.—Wheat: Production and disposition of crop, United States, 1910 to 1921.

[In millions of bushels; i. e., 000 omitted.]

| Year.     | Production.   |               |        | Quality.    | On hand July 1. | Total supply. | Seed- ing. | Carry over. | Ex- ports. | Re- main- ing for con- sumption. | Canadian. |                        |
|-----------|---------------|---------------|--------|-------------|-----------------|---------------|------------|-------------|------------|----------------------------------|-----------|------------------------|
|           | Winter wheat. | Spring wheat. | Total. |             |                 |               |            |             |            |                                  | Crop.     | Ex- port. <sup>1</sup> |
| 1910..... | 434           | 201           | 635    | P. ct. 0.93 | 88              | 723           | 77         | 92          | 69         | 482                              | 132       | 01                     |
| 1911..... | 430           | 191           | 621    | .88         | 92              | 713           | 73         | 78          | 80         | 433                              | 231       | 77                     |
| 1912..... | 400           | 330           | 730    | .90         | 78              | 808           | 71         | 90          | 143        | 504                              | 224       | 104                    |
| 1913..... | 523           | 240           | 763    | .93         | 90              | 853           | 82         | 76          | 146        | 549                              | 232       | 152                    |
| 1914..... | 685           | 206           | 891    | .90         | 76              | 967           | 86         | 55          | 332        | 494                              | 161       | 91                     |
| 1915..... | 674           | 352           | 1,026  | .88         | 55              | 1,081         | 84         | 103         | 243        | 591                              | 394       | 177                    |
| 1916..... | 480           | 155           | 635    | .87         | 163             | * 824         | 80         | 49          | 204        | 403                              | 213       | 227                    |
| 1917..... | 413           | 224           | 637    | .92         | 48              | * 708         | 95         | 17          | 133        | 462                              | 234       | 186                    |
| 1918..... | 565           | 356           | 921    | .93         | 17              | 938           | 100        | 54          | 287        | 497                              | 180       | 100                    |
| 1919..... | 732           | 200           | 941    | .82         | 54              | 995           | 90         | 108         | 220        | 507                              | 193       | 114                    |
| 1920..... | 578           | 209           | 787    | .86         | 151             | 938           | 90         | 88          | 365        | 464                              | 270       | 144                    |
| 1921..... | 587           | 208           | 795    | .87         | 79              | 874           | .....      | .....       | .....      | .....                            | .....     | .....                  |

<sup>1</sup> Includes wheat flour in terms of wheat. Calendar years.

\* Includes imports.

TABLE 41.—Wheat crop classified by grades.

[Based upon estimate of about 5,000 mill and elevator operators.]

SPRING WHEAT.

| State.             | No. 1. |      | No. 2. |      | No. 3. |      | No. 4. |      | No. 5. |       | Under 5. |      |
|--------------------|--------|------|--------|------|--------|------|--------|------|--------|-------|----------|------|
|                    | 1921   | 1920 | 1921   | 1920 | 1921   | 1920 | 1921   | 1920 | 1921   | 1920  | 1921     | 1920 |
| Wisconsin.....     | 2.7    | 5.7  | 16.5   | 15.2 | 25.1   | 25.4 | 25.6   | 20.8 | 19.7   | 18.8  | 10.4     | 14.1 |
| Minnesota.....     | 5.6    | 6.8  | 12.3   | 8.0  | 30.9   | 14.5 | 28.9   | 19.8 | 17.0   | 27.5  | 5.3      | 23.4 |
| Iowa.....          | 3.1    | 4.2  | 12.5   | 15.2 | 27.9   | 19.2 | 25.5   | 19.7 | 18.8   | 15.8  | 12.2     | 25.9 |
| North Dakota.....  | 14.0   | 31.7 | 22.2   | 18.9 | 29.7   | 13.0 | 20.5   | 14.1 | 10.0   | 10.6  | 3.6      | 6.7  |
| South Dakota.....  | 15.7   | 2.5  | 22.7   | 5.3  | 30.5   | 8.9  | 17.0   | 14.9 | 9.0    | 19.9  | 4.2      | 48.5 |
| Nebraska.....      | 11.2   | 7.3  | 29.6   | 14.1 | 20.9   | 17.1 | 17.4   | 15.8 | 9.4    | 14.8  | 5.5      | 30.9 |
| Montana.....       | 74.7   | 64.6 | 18.2   | 20.7 | 5.0    | 10.1 | 1.4    | 3.1  | .1     | ..... | .....    | .6   |
| Wyoming.....       | 70.0   | 30.8 | 19.3   | 27.5 | 10.7   | 22.5 | .....  | 15.0 | .....  | 3.9   | .....    | .3   |
| Colorado.....      | 38.3   | 33.0 | 37.3   | 30.5 | 13.8   | 10.4 | 7.2    | 8.7  | 1.5    | 4.7   | 1.9      | 3.7  |
| New Mexico.....    | .....  | 41.7 | .....  | 32.5 | .....  | 19.2 | .....  | 4.2  | .....  | 2.1   | .....    | .3   |
| Utah.....          | 33.6   | 25.9 | 40.1   | 51.6 | 17.1   | 17.2 | 5.6    | 5.0  | 3.4    | .3    | .2       | .0   |
| Idaho.....         | 37.3   | 28.9 | 41.5   | 49.6 | 13.5   | 13.7 | 3.8    | 3.4  | 2.7    | 1.3   | 1.3      | 2.6  |
| Washington.....    | 22.0   | 20.0 | 44.2   | 36.4 | 25.9   | 28.5 | 5.9    | 10.9 | 1.2    | 3.1   | .8       | 1.1  |
| Oregon.....        | 50.0   | 45.3 | 37.6   | 33.9 | 9.6    | 14.1 | 2.3    | 4.1  | 1.5    | 1.8   | .....    | .8   |
| United States..... | 24.1   | 24.0 | 25.6   | 20.8 | 24.2   | 16.6 | 15.1   | 12.8 | 7.9    | 11.8  | 3.1      | 14.0 |

WINTER WHEAT.

|                   |      |      |      |      |      |      |      |     |     |     |     |     |
|-------------------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|
| New York.....     | 13.6 | 18.4 | 48.4 | 57.1 | 25.4 | 18.8 | 7.6  | 4.6 | 2.7 | 0.9 | 2.3 | 0.2 |
| Pennsylvania..... | 12.3 | 13.4 | 48.6 | 52.2 | 27.5 | 22.3 | 8.1  | 7.9 | 2.3 | 2.9 | 1.2 | 1.3 |
| Maryland.....     | 12.2 | 25.1 | 39.8 | 45.2 | 25.5 | 19.0 | 14.2 | 7.6 | 5.5 | 2.0 | 2.8 | 1.1 |
| Virginia.....     | 16.2 | 22.5 | 49.8 | 40.7 | 19.3 | 11.8 | 9.8  | 3.4 | 3.3 | .4  | 1.6 | 1.2 |
| Ohio.....         | 6.9  | 42.4 | 41.0 | 48.1 | 33.2 | 20.1 | 13.1 | 6.7 | 4.2 | 1.7 | 1.6 | 1.0 |
| Indiana.....      | 5.7  | 14.4 | 36.9 | 50.1 | 35.7 | 22.9 | 14.4 | 8.7 | 4.9 | 2.4 | 2.4 | 1.5 |
| Illinois.....     | 8.3  | 22.2 | 43.9 | 47.8 | 29.4 | 19.9 | 12.9 | 7.1 | 3.5 | 2.0 | 2.0 | 1.0 |
| Michigan.....     | 12.6 | 20.2 | 49.8 | 50.4 | 28.2 | 19.2 | 8.2  | 6.5 | 2.5 | 2.3 | 1.1 | 1.4 |
| Iowa.....         | 9.8  | 15.7 | 44.6 | 45.1 | 30.6 | 28.1 | 10.6 | 7.7 | 2.4 | 2.1 | 2.0 | 1.3 |
| Missouri.....     | 3.8  | 19.7 | 24.2 | 47.8 | 35.0 | 21.1 | 22.8 | 8.0 | 9.2 | 2.4 | 5.0 | 1.0 |

## WHEAT—Continued.

TABLE 41.—Wheat crop classified by grades—Continued.

## WINTER WHEAT—Continued.

| State.             | No. 1. |      | No. 2. |      | No. 3. |      | No. 4. |      | No. 5. |      | No. 6. |      |
|--------------------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
|                    | 1921   | 1920 | 1921   | 1920 | 1921   | 1920 | 1921   | 1920 | 1921   | 1920 | 1921   | 1920 |
| Nebraska.....      | 23.4   | 21.4 | 47.0   | 42.9 | 21.8   | 20.9 | 5.9    | 9.4  | 1.6    | 3.5  | .3     | 1.9  |
| Kansas.....        | 24.2   | 38.4 | 39.9   | 38.2 | 21.5   | 16.7 | 9.8    | 5.9  | 3.3    | 2.3  | 1.3    | .5   |
| Kentucky.....      | 4.3    | 10.5 | 35.2   | 42.3 | 35.6   | 23.3 | 16.9   | 12.8 | 6.3    | 6.1  | 1.7    | 5.0  |
| Tennessee.....     | 8.2    | 9.8  | 39.4   | 42.6 | 32.6   | 29.3 | 13.5   | 12.5 | 4.2    | 3.9  | 2.1    | 1.9  |
| Texas.....         | 13.7   | 23.3 | 27.5   | 21.3 | 35.7   | 17.7 | 14.7   | 16.5 | 6.3    | 12.2 | 2.1    | 0.0  |
| Oklahoma.....      | 9.2    | 32.4 | 34.7   | 41.8 | 34.2   | 16.8 | 14.0   | 6.2  | 5.7    | 2.0  | 2.2    | .8   |
| Montana.....       | 68.1   | 68.4 | 20.6   | 20.9 | 8.7    | 8.5  | 1.6    | 1.4  | .5     | .4   | .5     | .4   |
| Colorado.....      | 48.0   | 56.6 | 31.3   | 30.3 | 12.8   | 9.5  | 4.5    | 2.9  | 2.1    | .4   | 1.3    | .3   |
| Idaho.....         | 26.9   | 32.9 | 50.4   | 52.6 | 13.1   | 12.5 | 2.4    | 1.8  | .6     | .2   | 3.6    | .0   |
| Washington.....    | 36.9   | 37.4 | 45.4   | 42.6 | 14.3   | 16.7 | 3.0    | 2.3  | .0     | 1.0  | .4     | .0   |
| Oregon.....        | 49.4   | 41.3 | 34.0   | 40.9 | 11.2   | 11.2 | 4.4    | 3.8  | .9     | 1.4  | .1     | 1.4  |
| California.....    | 56.7   | 42.1 | 26.3   | 30.4 | 11.8   | 16.0 | 2.4    | 6.5  | 2.1    | 3.1  | .7     | 1.9  |
| United States..... | 19.7   | 29.5 | 39.9   | 42.0 | 25.1   | 18.2 | 10.2   | 6.7  | 3.5    | 2.4  | 1.6    | 1.2  |

TABLE 42.—Wheat, including flour: International trade, calendar years, 1909-1920.<sup>1</sup>

In the  
prop.  
Table

| Country.                              | Average, 1909-1913.   |                       | 1918.                 |                       | 1919                  |                       | 1920                  |                       |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                       | Imports.              | Exports.              | Imports.              | Exports.              | Imports.              | Exports.              | Imports.              | Exports.              |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> |
| Argentina.....                        | 3                     | 95,243                | 3                     | 119,029               | 4                     | 137,356               | .....                 | .....                 |
| Australia.....                        | 7                     | 49,732                | 3                     | 66,760                | 4                     | 106,247               | .....                 | .....                 |
| British India.....                    | 541                   | 51,510                | 302                   | 24,144                | 7,730                 | 2,524                 | 152                   | 5,756                 |
| Bulgaria.....                         | 39                    | 11,244                | .....                 | .....                 | .....                 | 17                    | .....                 | 668                   |
| Canada.....                           | 426                   | 90,871                | 333                   | 93,247                | 114                   | 113,583               | 226                   | 144,345               |
| Chile.....                            | 170                   | 2,593                 | 110                   | 4,370                 | 104                   | 2,648                 | 44                    | 1,368                 |
| Rumania.....                          | 178                   | 52,370                | .....                 | .....                 | 8,614                 | 1                     | .....                 | 105                   |
| Russia.....                           | 5,924                 | 161,766               | .....                 | .....                 | .....                 | .....                 | .....                 | .....                 |
| United States.....                    | 1,537                 | 100,310               | 17,788                | 208,857               | 7,986                 | 267,111               | 39,412                | 307,630               |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                       |                       |                       |                       |                       |                       |                       |                       |
| Belgium.....                          | 73,987                | 22,694                | .....                 | .....                 | 12,323                | 847                   | 33,868                | 331                   |
| Brazil.....                           | 20,495                | .....                 | 18,499                | .....                 | 22,404                | .....                 | 15,879                | .....                 |
| British South Africa.....             | 6,397                 | 268                   | 1,824                 | 171                   | 2,137                 | 162                   | 8,711                 | 99                    |
| Denmark.....                          | 6,711                 | 523                   | 353                   | 13                    | 893                   | 509                   | 1,159                 | 119                   |
| Finland.....                          | 4,912                 | ( <sup>2</sup> )      | 45                    | .....                 | 2,987                 | .....                 | 1,660                 | .....                 |
| France.....                           | 38,698                | 1,529                 | 72,922                | 870                   | 86,630                | 1,282                 | 87,770                | 1,172                 |
| Germany.....                          | 89,755                | 21,149                | .....                 | .....                 | .....                 | .....                 | 24,572                | 910                   |
| Greece.....                           | 7,034                 | 2                     | 6,702                 | .....                 | 11,551                | .....                 | 16,918                | .....                 |
| Italy.....                            | 52,896                | 3,273                 | 78,671                | 323                   | 95,503                | 913                   | 79,875                | 1,579                 |
| Japan.....                            | 3,495                 | 25                    | 2,874                 | 2,899                 | 11,543                | 2                     | 7,088                 | 94                    |
| Netherlands.....                      | 76,853                | 54,394                | 2,245                 | 21                    | 18,129                | 264                   | 20,194                | 1,095                 |
| Portugal.....                         | 3,228                 | 216                   | 1,710                 | 8                     | 4,218                 | 7                     | .....                 | .....                 |
| Spain.....                            | 4,471                 | 65                    | 6,939                 | 982                   | 13,426                | 1,000                 | 18,669                | 721                   |
| Sweden.....                           | 7,140                 | 20                    | 2,402                 | 46                    | 4,079                 | 80                    | 8,096                 | 30                    |
| Switzerland.....                      | 18,885                | 109                   | 7,406                 | ( <sup>2</sup> )      | 13,148                | 211                   | 12,241                | 272                   |
| United Kingdom.....                   | 219,156               | 4,514                 | 175,460               | 481                   | 178,612               | 644                   | 234,475               | 690                   |
| Other countries.....                  | 57,838                | 20,784                | 17,479                | 17,103                | 27,268                | 31,329                | 44,141                | 4,094                 |
| <b>Total.....</b>                     | <b>700,526</b>        | <b>745,194</b>        | <b>414,070</b>        | <b>539,294</b>        | <b>529,407</b>        | <b>666,670</b>        | <b>855,178</b>        | <b>471,078</b>        |

<sup>1</sup> Does not include statistics of trade for Austria-Hungary, Belgium, and Germany during the war period, 1914-1918. Therefore the total trade statistics of imports and exports for all countries are not strictly comparable during that period.

<sup>2</sup> Less than 500.

# Statistics of Oats.

539

## OATS.

TABLE 43.—Oats: Area and production in undermentioned countries, 1909-1921.

| Country.                            | Area.                              |                         |                         |                         | Production.                        |                           |                           |                           |
|-------------------------------------|------------------------------------|-------------------------|-------------------------|-------------------------|------------------------------------|---------------------------|---------------------------|---------------------------|
|                                     | Average<br>1909-1913. <sup>1</sup> | 1919                    | 1920                    | 1921                    | Average<br>1909-1913. <sup>1</sup> | 1919                      | 1920                      | 1921                      |
| <b>NORTH AMERICA.</b>               | <i>1,000<br/>acres.</i>            | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>bushels.</i>          | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| United States.....                  | 37,357                             | 40,359                  | 42,481                  | 44,826                  | 1,131,175                          | 1,184,030                 | 1,496,281                 | 1,060,737                 |
| Canada:                             |                                    |                         |                         |                         |                                    |                           |                           |                           |
| New Brunswick..                     | 204                                | 305                     | 309                     | 285                     | 5,933                              | 9,261                     | 9,118                     | 7,118                     |
| Quebec.....                         | 1,451                              | 2,141                   | 2,205                   | 2,367                   | 40,294                             | 57,275                    | 66,729                    | 50,591                    |
| Ontario.....                        | 2,964                              | 2,674                   | 2,880                   | 3,095                   | 105,036                            | 78,388                    | 129,171                   | 72,575                    |
| Manitoba.....                       | 1,379                              | 1,847                   | 1,874                   | 2,226                   | 54,192                             | 57,698                    | 57,657                    | 49,442                    |
| Saskatchewan..                      | 2,293                              | 4,838                   | 5,107                   | 5,682                   | 98,481                             | 112,157                   | 141,549                   | 170,513                   |
| Alberta.....                        | 1,223                              | 2,767                   | 3,090                   | 2,912                   | 52,045                             | 65,725                    | 115,091                   | 64,192                    |
| Other.....                          | 326                                | 380                     | 384                     | 383                     | 11,697                             | 13,883                    | 11,395                    | 11,801                    |
| Total Canada..                      | 9,840                              | 14,952                  | 15,850                  | 16,950                  | 367,678                            | 394,387                   | 530,710                   | 426,232                   |
| Mexico.....                         | .....                              | .....                   | .....                   | .....                   | 17                                 | .....                     | .....                     | .....                     |
| Total North<br>America.....         | 47,197                             | .....                   | .....                   | .....                   | 1,498,870                          | .....                     | .....                     | .....                     |
| <b>SOUTH AMERICA.</b>               |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Argentina.....                      | 1,999                              | 3,080                   | 2,301                   | 2,061                   | 52,122                             | 33,762                    | 57,113                    | 47,606                    |
| Chile.....                          | 68                                 | 79                      | .....                   | 56                      | 2,934                              | 3,250                     | 3,250                     | 2,715                     |
| Uruguay.....                        | 46                                 | 85                      | 81                      | 76                      | 830                                | 1,288                     | 1,479                     | 1,966                     |
| Total South<br>America.....         | 2,113                              | 3,244                   | .....                   | 2,193                   | 55,886                             | 38,300                    | 61,842                    | 52,300                    |
| <b>EUROPE.</b>                      |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Austria.....                        | <sup>2</sup> 4,613                 | 606                     | 627                     | 664                     | <sup>2</sup> 143,392               | 13,581                    | 15,974                    | 18,776                    |
| Croatia-Slavonia <sup>2</sup>       | 246                                | .....                   | .....                   | .....                   | 5,216                              | .....                     | .....                     | .....                     |
| Bosnia Herzegovina <sup>2</sup>     | 225                                | .....                   | .....                   | .....                   | 4,973                              | .....                     | .....                     | .....                     |
| Belgium.....                        | 644                                | 551                     | 586                     | 603                     | 40,905                             | 27,361                    | 33,865                    | 30,251                    |
| Bulgaria.....                       | <sup>2</sup> 455                   | 302                     | 332                     | 407                     | <sup>2</sup> 9,880                 | 7,387                     | 10,125                    | 11,271                    |
| Czechoslovakia..                    | .....                              | <sup>1</sup> 1,375      | 1,981                   | 2,003                   | .....                              | <sup>2</sup> 46,099       | 59,654                    | 72,351                    |
| Denmark.....                        | 1,028                              | 997                     | 1,091                   | 1,112                   | 43,115                             | 47,583                    | 50,794                    | 52,016                    |
| Finland.....                        | <sup>2</sup> 987                   | 1,013                   | 1,038                   | 1,039                   | 21,939                             | 24,133                    | 24,561                    | 28,029                    |
| France.....                         | <sup>2</sup> 9,801                 | 7,296                   | 8,278                   | 8,298                   | <sup>2</sup> 310,020               | 179,825                   | 291,406                   | 245,205                   |
| Germany.....                        | <sup>2</sup> 10,750                | 7,396                   | 8,015                   | 7,832                   | <sup>2</sup> 591,996               | 309,587                   | 335,521                   | 324,880                   |
| Greece.....                         | .....                              | 155                     | 273                     | .....                   | .....                              | 2,749                     | 3,996                     | 4,134                     |
| Hungary.....                        | <sup>2</sup> 2,669                 | .....                   | 802                     | 806                     | <sup>2</sup> 85,840                | .....                     | 22,307                    | 20,140                    |
| Italy.....                          | 1,253                              | 1,129                   | 1,159                   | 1,198                   | 36,945                             | 34,695                    | 24,223                    | 37,774                    |
| Luxemburg.....                      | 77                                 | 62                      | 62                      | 62                      | 3,382                              | 1,699                     | 1,849                     | 1,550                     |
| Netherlands.....                    | 346                                | 389                     | 395                     | 378                     | 18,512                             | 20,392                    | 22,186                    | 21,289                    |
| Norway.....                         | 266                                | 343                     | 342                     | 342                     | 10,245                             | 15,106                    | 15,078                    | 12,742                    |
| Rumania.....                        | <sup>2</sup> 1,105                 | <sup>2</sup> 952        | 2,165                   | 2,167                   | <sup>2</sup> 27,545                | <sup>2</sup> 22,824       | 54,343                    | 62,211                    |
| Russia Proper <sup>2</sup>          | 38,013                             | .....                   | .....                   | .....                   | 874,945                            | .....                     | .....                     | .....                     |
| Poland.....                         | <sup>2</sup> 2,858                 | <sup>2</sup> 2,440      | 4,119                   | 4,738                   | <sup>2</sup> 70,590                | <sup>2</sup> 76,281       | 129,061                   | 149,788                   |
| Northern Caucasus <sup>2</sup>      | 1,190                              | .....                   | .....                   | .....                   | 20,602                             | .....                     | .....                     | .....                     |
| Serbia <sup>2</sup>                 | 266                                | .....                   | .....                   | .....                   | 5,443                              | .....                     | .....                     | .....                     |
| Spain.....                          | 1,276                              | 1,595                   | 1,598                   | 1,527                   | 29,110                             | 32,915                    | 37,772                    | 40,085                    |
| Sweden.....                         | 1,909                              | 1,762                   | 1,758                   | 1,757                   | 79,115                             | 76,591                    | 70,616                    | 67,585                    |
| Switzerland.....                    | 81                                 | 57                      | 56                      | 52                      | 4,784                              | 5,770                     | 5,118                     | 3,036                     |
| Yugoslavia.....                     | .....                              | .....                   | 1,035                   | .....                   | .....                              | <sup>2</sup> 42,192       | <sup>2</sup> 20,354       | .....                     |
| United Kingdom:                     |                                    |                         |                         |                         |                                    |                           |                           |                           |
| England.....                        | 1,835                              | 2,252                   | 2,017                   | 1,932                   | 74,750                             | 80,418                    | 78,768                    | 74,196                    |
| Wales.....                          | 204                                | 312                     | 249                     | 215                     | 7,274                              | 10,920                    | 7,900                     | 6,040                     |
| Scotland.....                       | 852                                | 1,111                   | 1,032                   | 1,011                   | 37,670                             | 42,440                    | 41,258                    | 48,732                    |
| Ireland.....                        | 1,049                              | 1,442                   | 1,332                   | 1,254                   | 63,083                             | 85,540                    | 68,888                    | 56,238                    |
| Total United<br>Kingdom.....        | 4,040                              | 5,117                   | 4,630                   | 4,412                   | 182,777                            | 219,316                   | 192,612                   | 183,146                   |
| Total Europe..                      | 84,158                             | .....                   | .....                   | .....                   | 2,636,321                          | .....                     | .....                     | .....                     |
| <b>ASIA.</b>                        |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Cyprus.....                         | .....                              | .....                   | .....                   | .....                   | 429                                | .....                     | .....                     | .....                     |
| Russia (Asiatic) <sup>2</sup> ..... | 4,912                              | .....                   | .....                   | .....                   | 87,403                             | .....                     | .....                     | .....                     |

<sup>1</sup> Five-year average except in a few cases where statistics were unavailable.

<sup>2</sup> Old boundaries.

<sup>3</sup> Bohemia, Moravia, and Silesia.

<sup>4</sup> 1910 Census.

<sup>5</sup> Former Kingdom, Bessarabia and Bukovina.

<sup>6</sup> Former Russian Poland, Western Galicia, and Posen.

<sup>7</sup> Unofficial.



## OATS—Continued.

TABLE 43.—Oats: Area and production in undermentioned countries, 1909–1921—Con.

| Country.                   | Area.                 |                  |                  |                 | Production.           |                   |                   |                   |
|----------------------------|-----------------------|------------------|------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|
|                            | Average<br>1909–1913. | 1919             | 1920             | 1921            | Average<br>1909–1913. | 1919              | 1920              | 1921              |
| AFRICA.                    | 1,000<br>acres.       | 1,000<br>acres.  | 1,000<br>acres.  | 1,000<br>acres. | 1,000<br>bushels.     | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. |
| Algeria.....               | 456                   | 536              | 574              | 553             | 12,950                | 10,634            | 6,855             | 11,412            |
| Tunis.....                 | 141                   | 138              | 149              | 165             | 4,333                 | 3,445             | 1,481             | 5,167             |
| Union of South Africa..... |                       | 641              | 558              | 564             | 7,197                 | 6,689             | 4,985             | 7,789             |
| Total Africa.....          |                       | 1,312            | 1,281            | 1,287           | 24,480                | 20,768            | 13,321            | 24,368            |
| AUSTRALASIA.               |                       |                  |                  |                 |                       |                   |                   |                   |
| Australia:                 |                       |                  |                  |                 |                       |                   |                   |                   |
| Queensland.....            | 2                     | ( <sup>9</sup> ) | ( <sup>9</sup> ) |                 | 47                    | 4                 | 3                 |                   |
| New South Wales.....       | 75                    | 87               | 77               |                 | 1,571                 | * 1,273           | * 590             |                   |
| Victoria.....              | 388                   | 343              | 560              |                 | 8,592                 | 5,275             | 6,603             |                   |
| South Australia.....       | 101                   | 161              | 192              |                 | 1,371                 | 1,541             | 1,634             |                   |
| Western Australia.....     |                       |                  |                  |                 |                       |                   |                   |                   |
| Tasmania.....              | 81                    | 141              | 192              |                 | 1,204                 | 1,500             | 2,487             |                   |
| .....                      | 61                    | 36               | 48               |                 | 2,066                 | 848               | 1,242             |                   |
| Total Australia.....       | 708                   | 768              | 1,069            |                 | 14,851                | 10,441            | 12,559            |                   |
| New Zealand.....           | 376                   | 173              | 180              | 149             | 13,664                | 6,385             | 8,402             | 5,225             |
| Total Australasia.....     | 1,084                 | 941              | 1,249            |                 | 28,515                | 17,326            | 21,051            |                   |
| Grand total.....           | 149,061               |                  |                  |                 | 4,331,904             |                   |                   |                   |

<sup>9</sup> Less than 500 acres.

\* Including Federal Territory.

TABLE 44.—Oats: Total production in countries as far as reported, 1895–1921.

| Year.     | Production.   | Year.     | Production.   | Year.     | Production.   | Year.     | Production.   |
|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|
|           | Bushels.      |           | Bushels.      |           | Bushels.      |           | Bushels.      |
| 1895..... | 3,908,154,000 | 1902..... | 3,626,208,000 | 1899..... | 4,312,882,000 | 1916..... | 3,484,671,000 |
| 1896..... | 2,847,115,000 | 1903..... | 3,376,084,000 | 1910..... | 4,132,410,000 | 1917..... | 3,006,747,000 |
| 1897..... | 2,633,971,000 | 1904..... | 3,011,302,000 | 1911..... | 3,808,561,000 | 1918..... | 3,112,622,000 |
| 1898..... | 2,903,974,000 | 1905..... | 3,519,187,000 | 1912..... | 4,617,394,000 | 1919..... | 2,867,897,000 |
| 1899..... | 3,220,256,000 | 1906..... | 3,544,904,000 | 1913..... | 4,097,427,000 | 1920..... | 3,548,621,000 |
| 1900..... | 3,161,002,000 | 1907..... | 3,808,896,000 | 1914..... | 4,084,857,000 | 1921..... | 2,955,079,000 |
| 1901..... | 2,802,615,000 | 1908..... | 3,591,012,000 | 1915..... | 4,306,580,000 |           |               |

TABLE 45.—Oats: Average yield per acre in undermentioned countries, 1890–1921.

| Year.          | United States. | Russia (European). | Germany. | Austria. | Hungary Proper. | France.  | United Kingdom. <sup>1</sup> |
|----------------|----------------|--------------------|----------|----------|-----------------|----------|------------------------------|
| Average:       | Bushels.       | Bushels.           | Bushels. | Bushels. | Bushels.        | Bushels. | Bushels.                     |
| 1890–1899..... | 24.1           | 17.8               | 40.0     | 25.3     | .....           | 29.8     | 43.6                         |
| 1900–1909..... | 29.3           | 20.0               | 50.7     | 29.8     | 30.7            | 33.0     | 44.3                         |
| 1910–1919..... | 32.1           | * 22.2             | 47.5     | .....    | * 34.8          | 32.8     | 43.1                         |
| 1919.....      | 29.3           | .....              | 41.9     | 32.4     | .....           | 24.6     | 42.9                         |
| 1920.....      | 35.2           | .....              | 41.9     | 25.5     | 27.8            | 35.2     | 41.6                         |
| 1921.....      | 23.7           | .....              | 41.2     | 23.3     | 25.0            | 29.6     | 41.5                         |

<sup>1</sup> Winchester bushels.

\* Seven-year average.

\* Six-year average.

# Statistics of Oats.

541

## OATS—Continued.

TABLE 46.—Oats: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See headnote of Table 4.]

| Year.          | Acreage harvested (000 omitted). | Average yield per acre. | Production (000 omitted). | Average farm price per bushel Dec. 1. | Farm value Dec. 1 (000 omitted). | Chicago cash price per bushel, No. 1 northern spring. <sup>1</sup> |       |                |       | Domestic exports, including flour, fiscal year beginning July 1. <sup>2</sup> | Imports, including flour, fiscal year beginning July 1. <sup>3</sup> |
|----------------|----------------------------------|-------------------------|---------------------------|---------------------------------------|----------------------------------|--|-------|----------------|-------|---|--|
|                |                                  |                         |                           |                                       |                                  | December.  |       | Following May. |       |   |  |
|                |                                  |                         |                           |                                       |                                  | Low.   | High. | Low.           | High. |   |  |
|                | Acrea.                           | Bush.                   | Bushels.                  | Cents.                                | Dollars.                         | Cts.   | Cts.  | Cts.           | Cts.  | Bushels.  | Bushels.   |
| 1849.....      |                                  |                         | 148,584                   |                                       |                                  |  |       |                |       |   |  |
| 1850.....      |                                  |                         | 172,645                   |                                       |                                  |  |       |                |       |   |  |
| 1866-1875..... | 9,680                            | 28.2                    | 272,993                   | 37.5                                  | 102,423                          | 38   | 42    | 45             | 52    | 546,033   | 732,615  |
| 1876-1885..... | 17,143                           | 27.4                    | 469,856                   | 32.5                                  | 152,594                          | 29   | 33    | 33             | 38    | 3,106,723   | 366,123  |
| 1886-1895..... | 27,482                           | 26.1                    | 717,149                   | 28.9                                  | 207,040                          | 27   | 29    | 28             | 32½   | 5,607,237   | 111,587  |
| 1896.....      | 26,645                           | 26.3                    | 780,568                   | 18.3                                  | 143,192                          | 16½  | 18½   | 16½            | 18½   | 37,725,083  | 131,204  |
| 1897.....      | 28,353                           | 27.9                    | 791,561                   | 20.8                                  | 164,886                          | 21   | 23½   | 26             | 32    | 73,580,307  | 25,093   |
| 1898.....      | 28,769                           | 29.3                    | 842,747                   | 25.2                                  | 212,482                          | 26   | 27½   | 24             | 27½   | 33,534,362  | 28,098   |
| 1899.....      | 29,540                           | 31.3                    | 925,585                   | 24.5                                  | 226,588                          | 22½  | 26    | 23             | 26½   | 45,048,857  | 54,576   |
| 1900.....      | 30,240                           | 29.9                    | 904,566                   | 25.4                                  | 230,196                          | 21½  | 22½   | 27½            | 31    | 42,268,931  | 32,107   |
| 1901.....      | 29,894                           | 26.0                    | 778,581                   | 40.0                                  | 311,374                          | 42   | 48½   | 41             | 49½   | 13,277,612  | 38,978   |
| 1902.....      | 30,878                           | 34.5                    | 1,055,441                 | 30.6                                  | 322,944                          | 29½  | 32    | 33½            | 38½   | 8,381,805   | 150,035  |
| 1903.....      | 30,866                           | 27.5                    | 848,824                   | 33.8                                  | 286,879                          | 34½  | 38    | 39½            | 44½   | 1,960,740   | 183,983  |
| 1904.....      | 31,353                           | 32.1                    | 1,007,183                 | 31.0                                  | 312,467                          | 28½  | 32    | 28½            | 32    | 8,394,692   | 55,999   |
| 1905.....      | 32,072                           | 33.3                    | 1,068,780                 | 28.8                                  | 308,086                          | 29½  | 32½   | 32½            | 34½   | 48,434,541  | 40,035   |
| 1906.....      | 33,353                           | 31.0                    | 1,034,623                 | 31.8                                  | 329,142                          | 33   | 38½   | 44½            | 48½   | 6,386,334   | 91,289   |
| 1907.....      | 33,641                           | 24.0                    | 807,308                   | 44.3                                  | 357,340                          | 46½  | 50½   | 52½            | 56½   | 2,518,855   | 383,418  |
| 1908.....      | 34,006                           | 24.9                    | 847,100                   | 47.3                                  | 400,363                          | 48½  | 50½   | 56½            | 62½   | 2,333,517   | 6,691,700  |
| 1909.....      | 36,159                           | 30.4                    | 1,088,269                 | 40.6                                  | 433,869                          | 49   | 46    | 36½            | 43½   | 2,543,726   | 1,034,511  |
| 1910.....      | 37,548                           | 31.6                    | 1,186,341                 | 34.4                                  | 408,388                          | 31   | 32½   | 31½            | 36    | 3,845,850   | 107,818  |
| 1911.....      | 37,763                           | 24.4                    | 922,298                   | 45.0                                  | 414,663                          | 46½  | 47½   | 50½            | 58    | 2,677,749   | 2,622,357  |
| 1912.....      | 37,917                           | 37.4                    | 1,418,337                 | 31.9                                  | 452,469                          | 31   | 31½   | 35½            | 43    | 36,455,474  | 723,899  |
| 1913.....      | 38,399                           | 29.2                    | 1,121,798                 | 39.2                                  | 439,596                          | 37½  | 40½   | 37             | 42½   | 2,748,743   | 22,273,024   |
| 1914.....      | 38,442                           | 29.7                    | 1,141,060                 | 43.8                                  | 499,431                          | 46½  | 49½   | 50½            | 56    | 100,609,272   | 630,722  |
| 1915.....      | 40,996                           | 37.8                    | 1,549,080                 | 36.1                                  | 559,506                          | 40½  | 44    | 39½            | 49½   | 98,960,481  | 685,314  |
| 1916.....      | 41,527                           | 30.1                    | 1,251,837                 | 52.4                                  | 655,928                          | 46½  | 54    | 59½            | 74    | 95,195,698  | 761,644  |
| 1917.....      | 43,553                           | 36.6                    | 1,592,740                 | 66.6                                  | 1,061,474                        | 70½  | 80½   | 72             | 79½   | 125,090,611   | 2,591,077  |
| 1918.....      | 44,349                           | 34.7                    | 1,538,124                 | 70.9                                  | 1,090,322                        | 68   | 74½   | 67½            | 74½   | 109,094,734   | 551,355  |
| 1919.....      | 40,359                           | 29.3                    | 1,184,030                 | 70.4                                  | 833,922                          | 77   | 89    | 100½           | 117½  | 43,435,994  | 6,043,834  |
| 1920.....      | 42,491                           | 35.2                    | 1,496,281                 | 48.0                                  | 688,311                          | 47   | 52    |                |       | 9,391,096   | 3,795,638  |
| 1921.....      | 44,626                           | 23.7                    | 1,060,737                 | 30.3                                  | 321,540                          | 32½  | 42    |                |       |   |  |

<sup>1</sup> Quotations are for No. 2 to 1906.

<sup>2</sup> Oatmeal not included until 1882.

<sup>3</sup> Oatmeal not included 1867-1882, and 1909.

<sup>4</sup> Acreage adjusted to census basis.

<sup>5</sup> Preliminary estimate.

## OATS—Continued.

TABLE 47.—*Oats: Acreage, production, and total farm value, by States, 1919-1921.*

| State.             | Thousands of acres. |        |                   | Production (thousands of bushels). |           |                   | Total value, basis Dec. 1 price (thousands of dollars). |         |                   |
|--------------------|---------------------|--------|-------------------|------------------------------------|-----------|-------------------|---|---------|-------------------|
|                    | 1919                | 1920   | 1921 <sup>1</sup> | 1919                               | 1920      | 1921 <sup>1</sup> | 1919  | 1920    | 1921 <sup>1</sup> |
| Maine.....         | 117                 | 119    | 124               | 3,978                              | 4,974     | 4,340             | 3,660   | 4,228   | 2,387             |
| New Hampshire..    | 18                  | 18     | 18                | 594                                | 702       | 630               | 505   | 526     | 378               |
| Vermont.....       | 83                  | 81     | 81                | 2,448                              | 2,535     | 2,673             | 2,203   | 2,126   | 1,577             |
| Massachusetts....  | 9                   | 9      | 9                 | 287                                | 306       | 279               | 267   | 245     | 165               |
| Rhode Island.....  | 1                   | 1      | 1                 | 30                                 | 28        | 28                | 28  | 22      | 17                |
| Connecticut.....   | 11                  | 11     | 11                | 324                                | 330       | 330               | 285   | 248     | 198               |
| New York.....      | 1,008               | 1,059  | 1,038             | 25,704                             | 40,772    | 24,912            | 21,334  | 27,817  | 11,709            |
| New Jersey.....    | 71                  | 72     | 72                | 2,130                              | 2,304     | 1,728             | 1,704   | 1,728   | 778               |
| Pennsylvania.....  | 1,176               | 1,210  | 1,238             | 36,456                             | 47,190    | 35,283            | 29,185  | 31,145  | 15,877            |
| Delaware.....      | 6                   | 7      | 6                 | 138                                | 231       | 168               | 124   | 162     | 77                |
| Maryland.....      | 49                  | 50     | 60                | 1,372                              | 1,625     | 1,620             | 1,125   | 1,138   | 729               |
| Virginia.....      | 160                 | 148    | 163               | 3,520                              | 3,241     | 3,342             | 3,520   | 2,625   | 1,372             |
| West Virginia....  | 180                 | 200    | 210               | 3,780                              | 5,400     | 4,620             | 3,440   | 4,266   | 2,402             |
| North Carolina.... | 170                 | 154    | 170               | 2,839                              | 3,338     | 3,060             | 3,009   | 3,252   | 2,142             |
| South Carolina.... | 298                 | 307    | 338               | 6,354                              | 7,368     | 8,112             | 7,539   | 7,589   | 5,922             |
| Georgia.....       | 310                 | 344    | 412               | 6,200                              | 7,224     | 8,652             | 7,130   | 7,802   | 5,537             |
| Florida.....       | 40                  | 41     | 41                | 600                                | 697       | 633               | 720   | 418     | 346               |
| Ohio.....          | 1,452               | 1,540  | 1,614             | 47,916                             | 68,068    | 37,122            | 34,500  | 34,034  | 12,250            |
| Indiana.....       | 1,750               | 1,875  | 1,878             | 56,000                             | 76,875    | 45,072            | 38,640  | 35,362  | 13,071            |
| Illinois.....      | 4,291               | 4,334  | 4,594             | 128,730                            | 171,193   | 121,741           | 90,111  | 73,613  | 35,905            |
| Michigan.....      | 1,515               | 1,485  | 1,544             | 37,875                             | 53,806    | 28,101            | 26,891  | 28,227  | 10,116            |
| Wisconsin.....     | 2,348               | 2,408  | 2,632             | 78,423                             | 107,878   | 63,958            | 54,896  | 52,860  | 21,106            |
| Minnesota.....     | 3,526               | 3,702  | 3,924             | 98,728                             | 138,825   | 94,176            | 63,186  | 49,977  | 21,680            |
| Iowa.....          | 5,566               | 5,894  | 5,960             | 162,584                            | 229,866   | 154,960           | 123,254   | 82,752  | 35,641            |
| Missouri.....      | 1,767               | 1,918  | 2,148             | 46,089                             | 58,499    | 42,960            | 32,723  | 28,665  | 12,888            |
| North Dakota.....  | 2,397               | 2,518  | 2,619             | 37,154                             | 60,432    | 49,761            | 24,893  | 21,151  | 10,450            |
| South Dakota.....  | 1,963               | 2,219  | 2,650             | 56,927                             | 75,446    | 58,300            | 35,884  | 24,897  | 11,660            |
| Nebraska.....      | 2,133               | 2,400  | 2,585             | 69,962                             | 83,040    | 70,054            | 45,475  | 30,725  | 14,711            |
| Kansas.....        | 1,554               | 2,127  | 1,894             | 43,687                             | 65,299    | 38,827            | 31,877  | 25,467  | 10,483            |
| Kentucky.....      | 280                 | 280    | 283               | 6,300                              | 6,580     | 5,567             | 5,733   | 4,803   | 2,672             |
| Tennessee.....     | 220                 | 250    | 260               | 4,070                              | 4,950     | 5,330             | 3,785   | 3,861   | 2,558             |
| Alabama.....       | 222                 | 246    | 308               | 3,996                              | 4,423     | 4,776             | 4,196   | 3,897   | 4,404             |
| Mississippi.....   | 150                 | 123    | 147               | 2,400                              | 2,176     | 2,940             | 2,520   | 1,893   | 1,882             |
| Louisiana.....     | 50                  | 50     | 55                | 1,100                              | 1,160     | 1,265             | 1,100   | 943     | 886               |
| Texas.....         | 1,863               | 1,490  | 1,665             | 78,246                             | 32,780    | 33,570            | 50,077  | 21,635  | 13,092            |
| Oklahoma.....      | 1,573               | 1,650  | 1,765             | 50,336                             | 54,450    | 35,300            | 35,235  | 23,958  | 9,531             |
| Arkansas.....      | 280                 | 290    | 300               | 6,160                              | 7,250     | 6,603             | 5,421   | 5,655   | 2,970             |
| Montana.....       | 579                 | 533    | 469               | 3,474                              | 11,728    | 10,787            | 3,161   | 5,980   | 3,668             |
| Wyoming.....       | 100                 | 115    | 160               | 1,200                              | 4,370     | 4,500             | 1,344   | 2,709   | 1,710             |
| Colorado.....      | 174                 | 204    | 217               | 4,559                              | 6,426     | 6,727             | 4,103   | 3,856   | 2,220             |
| New Mexico.....    | 55                  | 61     | 61                | 1,507                              | 1,671     | 1,690             | 1,432   | 1,337   | 811               |
| Arizona.....       | 13                  | 13     | 18                | 455                                | 351       | 630               | 455   | 337     | 410               |
| Utah.....          | 62                  | 77     | 79                | 1,730                              | 2,603     | 2,876             | 1,695   | 2,082   | 1,064             |
| Nevada.....        | 3                   | 3      | 3                 | 76                                 | 112       | 113               | 76  | 134     | 85                |
| Idaho.....         | 185                 | 185    | 180               | 5,550                              | 7,080     | 7,740             | 5,439   | 4,790   | 2,477             |
| Washington.....    | 210                 | 210    | 210               | 8,400                              | 9,786     | 10,500            | 7,812   | 7,046   | 4,410             |
| Oregon.....        | 284                 | 300    | 272               | 8,389                              | 10,950    | 8,704             | 8,178   | 7,118   | 3,303             |
| California.....    | 147                 | 155    | 140               | 4,263                              | 4,660     | 3,780             | 4,002   | 3,720   | 1,928             |
| United States..    | 40,359              | 42,491 | 44,826            | 1,184,030                          | 1,496,281 | 1,060,737         | 833,922   | 688,811 | 321,540           |

<sup>1</sup> Preliminary estimate.

# Statistics of Oats.

543

## OATS—Continued.

TABLE 48.—Oats: Condition of crop, United States, on first of months named, 1901–1921.

| Year.    | June. | July. | August. | When harvested. | Year.    | June. | July. | August. | When harvested. | Year.    | June. | July. | August. | When harvested. |
|----------|-------|-------|---------|-----------------|----------|-------|-------|---------|-----------------|----------|-------|-------|---------|-----------------|
| 1901.... | 85.3  | 83.7  | 73.6    | 72.1            | 1908.... | 92.9  | 85.7  | 76.8    | 69.7            | 1915.... | 92.2  | 93.9  | 91.6    | 91.1            |
| 1902.... | 90.6  | 82.1  | 89.4    | 87.2            | 1909.... | 88.7  | 83.3  | 85.5    | 83.5            | 1916.... | 86.9  | 86.3  | 81.5    | 78.0            |
| 1903.... | 85.5  | 82.6  | 79.5    | 75.7            | 1910.... | 91.0  | 82.2  | 81.5    | 83.3            | 1917.... | 88.8  | 89.4  | 87.2    | 90.4            |
| 1904.... | 89.2  | 89.8  | 83.6    | 85.6            | 1911.... | 85.7  | 63.8  | 65.7    | 64.5            | 1918.... | 93.2  | 85.5  | 82.8    | 84.4            |
| 1905.... | 92.9  | 82.1  | 90.8    | 90.3            | 1912.... | 91.1  | 89.2  | 90.3    | 92.3            | 1919.... | 93.2  | 87.0  | 76.5    | 73.1            |
| 1906.... | 85.9  | 84.0  | 82.8    | 81.9            | 1913.... | 87.0  | 76.3  | 73.8    | 74.0            | 1920.... | 87.8  | 84.7  | 87.2    | 88.3            |
| 1907.... | 81.6  | 81.0  | 75.6    | 65.5            | 1914.... | 89.5  | 84.7  | 79.4    | 75.8            | 1921.... | 85.7  | 77.6  | 64.5    | 61.1            |

TABLE 49.—Oats: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | June.           | July.           | August.         | September.      | October production estimate. | Final estimate. |
|--------------|-----------------|-----------------|-----------------|-----------------|------------------------------|-----------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>              | <i>Bushels.</i> |
| 1912.....    | 1,109,000       | 1,139,000       | 1,207,000       | 1,290,000       | 1,417,172                    | 1,418,337       |
| 1913.....    | 1,104,000       | 1,081,000       | 1,028,000       | 1,066,000       | 1,122,139                    | 1,121,768       |
| 1914.....    | 1,216,223       | 1,199,805       | 1,153,240       | 1,115,548       | 1,139,741                    | 1,141,080       |
| 1915.....    | 1,287,854       | 1,398,996       | 1,402,100       | 1,407,670       | 1,517,478                    | 1,549,030       |
| 1916.....    | 1,254,834       | 1,316,887       | 1,274,028       | 1,231,042       | 1,229,182                    | 1,251,837       |
| 1917.....    | 1,380,593       | 1,452,907       | 1,456,138       | 1,533,476       | 1,580,714                    | 1,592,740       |
| 1918.....    | 1,500,049       | 1,436,617       | 1,427,596       | 1,477,348       | 1,535,297                    | 1,538,124       |
| 1919.....    | 1,439,991       | 1,396,637       | 1,260,463       | 1,218,935       | 1,219,521                    | 1,184,030       |
| 1920.....    | 1,315,476       | 1,322,065       | 1,402,064       | 1,441,839       | 1,444,411                    | 1,466,281       |
| Average..... | 1,289,780       | 1,299,322       | 1,290,070       | 1,309,095       | 1,356,184                    | 1,365,912       |
| 1921.....    | 1,404,922       | 1,328,937       | 1,137,202       | 1,090,282       | 1,078,519                    | 1,060,737       |

<sup>1</sup> Preliminary.

TABLE 50.—Oats: Production and distribution in the United States, 1897–1921.

[000 omitted under bushels.]

| Year.          | Old stock on farms Aug. 1. | Crop.           |                    |                  | Total supplies. | Stock on farms Mar. 1 following. | Shipped out of county where grown. |
|----------------|----------------------------|-----------------|--------------------|------------------|-----------------|----------------------------------|------------------------------------|
|                |                            | Quantity.       | Weight per bushel. | Quality.         |                 |                                  |                                    |
|                | <i>Bushels.</i>            | <i>Bushels.</i> | <i>Pounds.</i>     | <i>Per cent.</i> | <i>Bushels.</i> | <i>Bushels.</i>                  | <i>Bushels.</i>                    |
| 1897–1901..... | 53,631                     | 754,358         | 30.2               | 86.9             | 807,989         | 273,014                          | 201,887                            |
| 1902–1906..... | 53,928                     | 916,931         | 31.0               | 87.7             | 970,859         | 350,013                          | 257,540                            |
| 1907.....      | 68,258                     | 754,443         | 29.4               | 77.0             | 822,701         | 267,476                          | 210,923                            |
| 1908.....      | 37,797                     | 807,156         | 29.8               | 81.8             | 844,953         | 278,847                          | 244,444                            |
| 1909.....      | 26,323                     | 1,007,143       | 32.7               | 91.4             | 1,033,456       | 365,438                          | 339,255                            |
| 1910.....      | 64,200                     | 1,186,341       | 32.7               | 93.8             | 1,250,541       | 442,665                          | 383,103                            |
| 1911.....      | 67,801                     | 922,298         | 31.1               | 84.6             | 990,099         | 289,939                          | 265,944                            |
| 1912.....      | 34,875                     | 1,418,337       | 33.0               | 91.0             | 1,453,212       | 604,249                          | 438,130                            |
| 1913.....      | 103,916                    | 1,121,768       | 32.1               | 89.1             | 1,225,684       | 419,421                          | 297,365                            |
| 1914.....      | 62,467                     | 1,141,080       | 31.5               | 86.5             | 1,203,527       | 379,369                          | 335,539                            |
| 1915.....      | 55,607                     | 1,549,030       | 33.0               | 87.5             | 1,604,637       | 598,148                          | 465,823                            |
| 1916.....      | 113,728                    | 1,251,837       | 31.2               | 88.2             | 1,365,565       | 394,211                          | 355,092                            |
| 1917.....      | 47,834                     | 1,592,740       | 33.4               | 95.1             | 1,640,574       | 599,208                          | 514,117                            |
| 1918.....      | 81,424                     | 1,538,124       | 33.2               | 93.6             | 1,619,548       | 590,261                          | 421,568                            |
| 1919.....      | 93,045                     | 1,184,030       | 31.1               | 84.7             | 1,277,075       | 409,730                          | 312,364                            |
| 1920.....      | 54,819                     | 1,496,281       | 33.1               | 93.3             | 1,551,100       | 683,769                          | 431,687                            |
| 1921.....      | 161,108                    | 1,060,737       | 28.3               | 74.7             | 1,221,845       | 404,461                          | 252,980                            |

## OATS—Continued.

TABLE 51.—Oats: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.              | Yield per acre (bushels). |      |      |      |      | Farm price per bushel (cents). |                            |      |      |      |      |      |      |      |      | Value per acre (dollars). <sup>1</sup> |       |                           |       |
|---------------------|---------------------------|------|------|------|------|--------------------------------|----------------------------|------|------|------|------|------|------|------|------|--|-------|---------------------------|-------|
|                     | 5-year average 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921                           | 10-year average 1912-1921. | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920                                   | 1921  | 5-year average 1916-1920. | 1921  |
| Maine.....          | 36.0                      | 29.0 | 40.0 | 34.0 | 41.8 | 35.0                           | 68                         | 51   | 55   | 57   | 45   | 67   | 85   | 90   | 92   | 85                                     | 55    | 30.32                     | 19.25 |
| New Hampshire.....  | 36.8                      | 38.0 | 33.0 | 33.0 | 39.0 | 35.0                           | 68                         | 48   | 56   | 58   | 54   | 69   | 84   | 87   | 85   | 75                                     | 60    | 29.56                     | 21.00 |
| Vermont.....        | 34.9                      | 36.0 | 41.0 | 28.5 | 35.0 | 33.0                           | 67                         | 48   | 52   | 55   | 53   | 65   | 85   | 90   | 90   | 75                                     | 59    | 28.12                     | 19.47 |
| Massachusetts.....  | 35.0                      | 37.0 | 40.0 | 33.0 | 34.0 | 31.0                           | 68                         | 47   | 54   | 56   | 51   | 66   | 81   | 91   | 90   | 80                                     | 59    | 28.88                     | 18.29 |
| Rhode Island.....   | 31.8                      | 31.0 | 42.0 | 30.0 | 28.0 | 28.0                           | 67                         | 45   | 50   | 56   | 50   | 63   | 75   | 90   | 95   | 80                                     | 60    | 26.06                     | 16.80 |
| Connecticut.....    | 32.1                      | 33.0 | 38.0 | 29.5 | 30.0 | 30.0                           | 68                         | 49   | 55   | 55   | 55   | 69   | 79   | 90   | 88   | 75                                     | 60    | 25.89                     | 18.00 |
| New York.....       | 32.8                      | 35.0 | 41.0 | 25.5 | 38.5 | 24.0                           | 60                         | 42   | 47   | 51   | 45   | 62   | 75   | 84   | 83   | 67                                     | 47    | 24.75                     | 11.28 |
| New Jersey.....     | 32.0                      | 34.0 | 40.0 | 30.0 | 32.0 | 24.0                           | 60                         | 44   | 47   | 54   | 48   | 61   | 70   | 79   | 80   | 75                                     | 45    | 24.34                     | 10.80 |
| Pennsylvania.....   | 34.5                      | 35.0 | 39.0 | 31.0 | 39.0 | 28.5                           | 58                         | 41   | 46   | 51   | 44   | 57   | 73   | 80   | 80   | 66                                     | 45    | 24.96                     | 12.82 |
| Delaware.....       | 30.2                      | 32.0 | 35.0 | 23.0 | 33.0 | 28.0                           | 63                         | 45   | 51   | 50   | 51   | 62   | 78   | 87   | 90   | 70                                     | 46    | 23.56                     | 12.88 |
| Maryland.....       | 30.3                      | 31.0 | 33.0 | 28.0 | 32.5 | 27.0                           | 61                         | 45   | 48   | 52   | 49   | 61   | 75   | 86   | 82   | 70                                     | 45    | 23.07                     | 12.15 |
| Virginia.....       | 22.4                      | 24.5 | 23.0 | 22.0 | 21.9 | 26.5                           | 70                         | 52   | 52   | 58   | 55   | 63   | 84   | 100  | 100  | 81                                     | 56    | 19.62                     | 11.48 |
| West Virginia.....  | 24.8                      | 27.0 | 27.0 | 21.0 | 27.0 | 22.0                           | 66                         | 47   | 51   | 55   | 51   | 64   | 79   | 91   | 91   | 79                                     | 52    | 20.21                     | 11.44 |
| North Carolina..... | 17.9                      | 16.0 | 17.0 | 16.7 | 22.0 | 18.0                           | 80                         | 62   | 61   | 65   | 62   | 74   | 93   | 108  | 106  | 96                                     | 70    | 17.00                     | 12.00 |
| South Carolina..... | 21.6                      | 15.0 | 22.0 | 23.0 | 24.0 | 24.0                           | 86                         | 66   | 71   | 71   | 67   | 80   | 100  | 118  | 110  | 103                                    | 73    | 21.06                     | 17.82 |
| Georgia.....        | 19.6                      | 16.0 | 20.0 | 20.0 | 21.0 | 21.0                           | 87                         | 65   | 68   | 70   | 66   | 79   | 117  | 119  | 115  | 108                                    | 64    | 20.72                     | 13.44 |
| Florida.....        | 15.4                      | 14.0 | 18.0 | 15.0 | 17.0 | 13.0                           | 81                         | 70   | 70   | 70   | 71   | 98   | 115  | 120  | 60   | 65                                     | 14.55 | 8.45                      |       |
| Ohio.....           | 37.6                      | 44.0 | 44.0 | 33.0 | 44.2 | 23.0                           | 50                         | 33   | 40   | 45   | 36   | 53   | 64   | 70   | 72   | 50                                     | 33    | 28.98                     | 7.59  |
| Indiana.....        | 36.2                      | 42.0 | 42.0 | 32.0 | 41.0 | 24.0                           | 47                         | 30   | 38   | 43   | 34   | 51   | 63   | 67   | 69   | 46                                     | 29    | 22.17                     | 6.96  |
| Illinois.....       | 38.4                      | 52.0 | 44.0 | 30.0 | 39.5 | 26.5                           | 47                         | 30   | 38   | 44   | 35   | 51   | 65   | 67   | 70   | 43                                     | 29    | 24.18                     | 7.68  |
| Michigan.....       | 31.8                      | 36.0 | 40.0 | 25.0 | 39.6 | 18.2                           | 49                         | 33   | 39   | 45   | 35   | 53   | 64   | 69   | 71   | 48                                     | 36    | 20.66                     | 6.55  |
| Wisconsin.....      | 38.6                      | 44.0 | 46.0 | 33.4 | 44.4 | 32.4                           | 48                         | 32   | 37   | 43   | 36   | 51   | 66   | 67   | 70   | 49                                     | 33    | 24.89                     | 8.02  |
| Minnesota.....      | 33.5                      | 37.0 | 41.0 | 28.0 | 37.5 | 24.0                           | 43                         | 26   | 32   | 40   | 32   | 47   | 63   | 63   | 64   | 36                                     | 23    | 18.60                     | 5.52  |
| Iowa.....           | 37.7                      | 47.0 | 42.0 | 34.6 | 39.9 | 26.0                           | 43                         | 27   | 34   | 41   | 32   | 48   | 63   | 64   | 64   | 36                                     | 23    | 22.09                     | 5.98  |
| Missouri.....       | 29.8                      | 40.0 | 29.0 | 27.0 | 30.5 | 20.0                           | 50                         | 35   | 45   | 44   | 38   | 53   | 61   | 70   | 71   | 49                                     | 30    | 18.41                     | 6.00  |
| North Dakota.....   | 19.4                      | 15.0 | 23.5 | 15.5 | 24.0 | 19.0                           | 41                         | 22   | 30   | 37   | 27   | 44   | 62   | 61   | 67   | 35                                     | 21    | 10.38                     | 3.99  |
| South Dakota.....   | 31.6                      | 34.0 | 39.0 | 29.0 | 34.0 | 22.0                           | 41                         | 25   | 34   | 38   | 28   | 46   | 61   | 59   | 63   | 33                                     | 20    | 17.45                     | 4.40  |
| Nebraska.....       | 30.9                      | 38.0 | 32.0 | 32.8 | 34.0 | 27.1                           | 44                         | 30   | 38   | 40   | 31   | 47   | 61   | 65   | 65   | 37                                     | 21    | 17.68                     | 5.69  |
| Kansas.....         | 26.5                      | 31.0 | 32.0 | 28.5 | 130  | 70.5                           | 49                         | 35   | 45   | 42   | 37   | 55   | 64   | 73   | 73   | 39                                     | 27    | 16.26                     | 5.64  |
| Kentucky.....       | 23.0                      | 26.0 | 24.0 | 22.5 | 23.5 | 19.0                           | 64                         | 44   | 52   | 53   | 46   | 60   | 76   | 90   | 91   | 73                                     | 48    | 18.32                     | 9.12  |
| Tennessee.....      | 21.8                      | 25.0 | 25.0 | 18.5 | 19.8 | 26.5                           | 65                         | 47   | 59   | 58   | 50   | 62   | 83   | 93   | 93   | 73                                     | 47    | 17.93                     | 9.34  |
| Alabama.....        | 19.0                      | 18.0 | 19.0 | 18.0 | 18.0 | 22.0                           | 80                         | 62   | 69   | 69   | 63   | 75   | 102  | 107  | 105  | 88                                     | 48    | 17.31                     | 14.30 |
| Mississippi.....    | 18.4                      | 19.0 | 20.0 | 16.0 | 17.0 | 26.0                           | 78                         | 60   | 63   | 65   | 60   | 74   | 94   | 107  | 105  | 87                                     | 64    | 16.83                     | 12.90 |
| Louisiana.....      | 23.1                      | 22.0 | 33.5 | 22.0 | 23.0 | 23.0                           | 74                         | 51   | 57   | 63   | 55   | 68   | 94   | 99   | 100  | 82                                     | 70    | 19.90                     | 16.10 |
| Texas.....          | 24.5                      | 28.0 | 14.7 | 42.0 | 22.0 | 118.0                          | 59                         | 43   | 51   | 48   | 42   | 61   | 82   | 92   | 94   | 66                                     | 39    | 12.72                     | 7.02  |
| Oklahoma.....       | 26.4                      | 23.0 | 24.0 | 32.0 | 33.0 | 22.0                           | 51                         | 34   | 45   | 41   | 35   | 57   | 75   | 84   | 70   | 44                                     | 27    | 16.29                     | 5.40  |
| Arkansas.....       | 24.5                      | 28.0 | 35.5 | 52.0 | 25.0 | 22.0                           | 65                         | 50   | 53   | 52   | 63   | 75   | 88   | 88   | 78   | 45                                     | 19.32 | 9.00                      |       |
| Montana.....        | 30.2                      | 20.0 | 30.0 | 6.0  | 22.0 | 23.0                           | 52                         | 35   | 32   | 39   | 32   | 47   | 81   | 80   | 91   | 51                                     | 34    | 14.95                     | 7.32  |
| Wyoming.....        | 31.4                      | 36.0 | 41.0 | 12.0 | 33.0 | 30.0                           | 66                         | 37   | 40   | 48   | 40   | 80   | 80   | 112  | 62   | 33                                     | 23.92 | 11.40                     |       |
| Colorado.....       | 31.3                      | 38.0 | 30.0 | 26.2 | 31.5 | 53.0                           | 57                         | 38   | 44   | 45   | 41   | 60   | 76   | 80   | 90   | 60                                     | 33    | 23.03                     | 10.28 |
| New Mexico.....     | 28.1                      | 30.0 | 28.0 | 27.4 | 42.7 | 42.7                           | 66                         | 45   | 60   | 45   | 50   | 67   | 84   | 89   | 95   | 80                                     | 48    | 23.50                     | 13.30 |
| Arizona.....        | 35.4                      | 40.0 | 40.0 | 35.0 | 27.0 | 33.5                           | 81                         | 70   | 50   | 70   | 64   | 80   | 96   | 120  | 100  | 96                                     | 65    | 35.46                     | 22.75 |
| Utah.....           | 37.8                      | 44.0 | 44.0 | 27.9 | 33.8 | 36.4                           | 64                         | 49   | 40   | 43   | 45   | 61   | 85   | 97   | 98   | 80                                     | 37    | 32.91                     | 13.47 |
| Nevada.....         | 35.6                      | 40.0 | 38.0 | 25.3 | 37.7 | 23.7                           | 81                         | 52   | 65   | 55   | 55   | 75   | 96   | 118  | 100  | 120                                    | 75    | 37.09                     | 23.28 |
| Idaho.....          | 37.8                      | 38.0 | 40.0 | 30.0 | 38.0 | 43.0                           | 56                         | 35   | 32   | 38   | 34   | 54   | 77   | 94   | 98   | 66                                     | 32    | 29.06                     | 13.76 |
| Washington.....     | 40.4                      | 38.5 | 52.7 | 40.0 | 44.8 | 50.0                           | 60                         | 40   | 40   | 42   | 37   | 51   | 81   | 98   | 93   | 72                                     | 42    | 30.98                     | 21.00 |
| Oregon.....         | 30.0                      | 25.0 | 25.0 | 31.3 | 33.6 | 52.0                           | 58                         | 41   | 38   | 45   | 37   | 69   | 75   | 96   | 92   | 65                                     | 33    | 23.76                     | 12.15 |
| California.....     | 30.6                      | 35.0 | 32.0 | 29.0 | 30.0 | 32.0                           | 70                         | 65   | 60   | 53   | 50   | 72   | 85   | 94   | 96   | 80                                     | 51    | 27.01                     | 13.77 |
| United States..     | 31.9                      | 36.6 | 34.7 | 29.3 | 35.2 | 23.7                           | 48.8                       | 31.9 | 39.2 | 43.8 | 36.1 | 52.4 | 66.6 | 70.9 | 70.4 | 46.0                                   | 30.3  | 20.32                     | 7.17  |

<sup>1</sup> Based upon farm prices December 1.

# Statistics of Oats.

545

## OATS—Continued.

TABLE 52.—Oats: Farm price, cents per bushel on first of each month, 1908-1921.

| Year.               | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Average. |
|---------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|----------|
| 1908.....           | 46.1     | 47.0      | 47.9   | 50.0   | 50.4 | 51.8  | 50.2  | 49.8    | 47.2       | 47.2     | 46.5      | 47.2      | 47.9     |
| 1909.....           | 48.1     | 48.1      | 51.1   | 53.2   | 55.3 | 57.4  | 50.2  | 50.0    | 42.3       | 41.0     | 41.0      | 40.2      | 46.4     |
| 1910.....           | 42.8     | 45.0      | 46.0   | 45.6   | 43.3 | 43.0  | 42.1  | 41.7    | 38.4       | 36.2     | 34.9      | 34.4      | 39.9     |
| 1911.....           | 33.2     | 33.1      | 32.8   | 32.3   | 33.2 | 34.7  | 37.5  | 40.2    | 40.4       | 42.5     | 43.8      | 45.0      | 38.7     |
| 1912.....           | 45.1     | 47.5      | 49.8   | 52.0   | 56.0 | 55.3  | 52.5  | 44.3    | 35.0       | 33.6     | 33.6      | 31.9      | 41.4     |
| 1913.....           | 32.2     | 32.4      | 33.1   | 33.1   | 34.2 | 36.0  | 37.7  | 37.6    | 39.3       | 39.6     | 37.9      | 39.2      | 36.8     |
| 1914.....           | 39.1     | 39.3      | 38.9   | 39.5   | 39.5 | 40.0  | 38.8  | 36.7    | 42.3       | 43.3     | 42.9      | 43.8      | 40.9     |
| 1915.....           | 45.0     | 50.1      | 52.1   | 53.4   | 53.4 | 51.3  | 46.7  | 45.4    | 38.5       | 34.5     | 34.9      | 36.1      | 42.5     |
| 1916.....           | 39.1     | 44.6      | 42.7   | 42.0   | 42.6 | 42.1  | 40.4  | 40.1    | 43.1       | 44.5     | 49.0      | 52.4      | 44.0     |
| 1917.....           | 51.4     | 55.2      | 56.9   | 61.5   | 71.0 | 69.9  | 68.9  | 73.7    | 61.7       | 62.3     | 61.7      | 66.6      | 62.7     |
| 1918.....           | 73.9     | 78.7      | 86.2   | 88.9   | 86.0 | 78.1  | 76.3  | 73.0    | 70.3       | 71.0     | 68.2      | 70.9      | 74.6     |
| 1919.....           | 70.8     | 64.3      | 62.6   | 65.8   | 70.9 | 71.2  | 70.9  | 75.3    | 71.7       | 63.4     | 68.7      | 70.4      | 69.4     |
| 1920.....           | 78.2     | 82.7      | 84.5   | 90.7   | 93.3 | 102.9 | 104.5 | 81.9    | 70.2       | 60.7     | 54.5      | 46.0      | 74.0     |
| 1921.....           | 45.6     | 41.8      | 41.9   | 39.3   | 36.8 | 37.9  | 35.6  | 33.8    | 30.1       | 31.0     | 29.2      | 30.3      | 34.3     |
| Average, 1912-1921. | 52.0     | 53.7      | 54.9   | 56.6   | 58.9 | 58.5  | 57.2  | 54.2    | 50.2       | 48.9     | 48.1      | 48.8      | 52.1     |

TABLE 53.—Oats: Monthly marketings by farmers, 1916-1921.

| Month.         | Estimated amount sold monthly by farmers of United States (millions of bushels). |         |         |         |         |             | Per cent of year's sales. |         |         |         |         |             |
|----------------|--|---------|---------|---------|---------|-------------|---------------------------|---------|---------|---------|---------|-------------|
|                | 1916-17  | 1917-18 | 1918-19 | 1919-20 | 1920-21 | 5-yr. aver. | 1916-17                   | 1917-18 | 1918-19 | 1919-20 | 1920-21 | 5-yr. aver. |
| July.....      | 31   | 24      | 34      | 47      | 36      | 34          | 8.3                       | 4.7     | 8.0     | 14.4    | 8.3     | 8.7         |
| August.....    | 87   | 82      | 82      | 60      | 80      | 78          | 23.3                      | 16.4    | 19.6    | 18.4    | 18.7    | 19.3        |
| September..... | 51   | 67      | 50      | 38      | 59      | 52          | 13.5                      | 13.5    | 11.9    | 10.1    | 13.8    | 12.5        |
| October.....   | 40   | 56      | 42      | 30      | 41      | 42          | 10.7                      | 11.1    | 9.9     | 9.2     | 9.5     | 10.1        |
| November.....  | 30   | 38      | 30      | 19      | 24      | 28          | 8.0                       | 7.7     | 7.2     | 5.8     | 5.5     | 6.8         |
| December.....  | 21   | 39      | 28      | 27      | 25      | 28          | 5.7                       | 7.8     | 6.7     | 8.3     | 5.8     | 6.9         |
| January.....   | 28   | 42      | 28      | 26      | 28      | 30          | 7.5                       | 8.3     | 6.7     | 8.2     | 6.6     | 7.5         |
| February.....  | 20   | 40      | 19      | 21      | 28      | 26          | 5.3                       | 8.0     | 4.5     | 6.6     | 6.6     | 6.2         |
| March.....     | 20   | 35      | 23      | 16      | 26      | 24          | 5.2                       | 7.1     | 5.5     | 4.0     | 6.0     | 5.7         |
| April.....     | 14   | 33      | 27      | 14      | 20      | 22          | 3.8                       | 6.5     | 6.3     | 4.3     | 4.6     | 5.1         |
| May.....       | 17   | 20      | 29      | 17      | 29      | 22          | 4.4                       | 4.0     | 7.0     | 5.2     | 6.8     | 5.5         |
| June.....      | 16   | 24      | 28      | 15      | 34      | 23          | 4.3                       | 4.9     | 6.7     | 4.6     | 7.8     | 5.7         |
| Season....     | 875  | 800     | 420     | 325     | 480     | 409         | 100.0                     | 100.0   | 100.0   | 100.0   | 100.0   | 100.0       |

## OATS—Continued.

TABLE 54.—Oats: Extent and causes of yearly crop losses, 1909–1920.

| Year.        | Deficient mois-<br>ture. | Excessive mois-<br>ture. | Floods. | Frost and freeze. | Hail.  | Hot winds. | Storms. | Total climatic. | Plant disease. | Insect pests. | Animal pests. | Defective seed. | Total. |
|--------------|--------------------------|--------------------------|---------|-------------------|--------|------------|---------|-----------------|----------------|---------------|---------------|-----------------|--------|
|              | P. ct.                   | P. ct.                   | P. ct.  | P. ct.            | P. ct. | P. ct.     | P. ct.  | P. ct.          | P. ct.         | P. ct.        | P. ct.        | P. ct.          | P. ct. |
| 1920.....    | 6.4                      | 2.7                      | 0.3     | 0.4               | 0.8    | 0.9        | 0.4     | 12.1            | 2.3            | 1.4           | 0.1           | 0.1             | 18.3   |
| 1919.....    | 11.5                     | 5.7                      | .4      | 1.4               | .7     | 2.8        | .4      | 22.3            | 4.9            | 2.2           | ( )           | .1              | 39.9   |
| 1918.....    | 12.9                     | 1.5                      | .2      | 1.3               | .9     | 1.6        | .3      | 18.1            | 1.1            | .9            | ( )           | .2              | 20.7   |
| 1917.....    | 11.3                     | 1.2                      | .2      | 2.7               | .3     | 1.0        | .3      | 18.2            | .8             | .4            | ( )           | ( )             | 19.8   |
| 1916.....    | 10.1                     | 4.0                      | .4      | .6                | .8     | 2.8        | .5      | 19.7            | 5.1            | 1.3           | ( )           | .1              | 27.2   |
| 1915.....    | 1.4                      | 8.5                      | .9      | .4                | 1.0    | 1.1        | .1      | 13.2            | 2.1            | .3            | ( )           | .2              | 16.3   |
| 1914.....    | 15.7                     | 2.2                      | .2      | .3                | .8     | 2.6        | .4      | 22.7            | 2.0            | 1.7           | .1            | .1              | 27.6   |
| 1913.....    | 22.7                     | .7                       | .2      | .2                | .6     | 1.8        | .2      | 27.2            | .5             | 1.1           | .1            | .1              | 30.3   |
| 1912.....    | 7.2                      | 3.1                      | .3      | .5                | 1.0    | 1.1        | .5      | 14.1            | 1.6            | .7            | .1            | .2              | 17.7   |
| 1911.....    | 27.6                     | 1.0                      | ( )     | .5                | .3     | 5.1        | .1      | 35.4            | .7             | 1.5           | .1            | .2              | 39.5   |
| 1910.....    | 17.0                     | .8                       | .2      | .7                | .4     | 1.7        | .3      | 21.4            | .9             | .6            | .2            | .2              | 24.0   |
| 1909.....    | 7.9                      | 5.2                      | .6      | .3                | 1.1    | .9         | .8      | 17.7            | 2.4            | .5            | .1            | .4              | 22.2   |
| Average..... | 12.7                     | 3.0                      | .3      | .7                | .8     | 1.9        | .4      | 20.2            | 2.0            | 1.0           | .1            | .2              | 24.3   |

<sup>1</sup> Less than .05 per cent.

TABLE 55.—Oats: Monthly and yearly average price per bushel of reported sales of No. 3 white, 1910–11 to 1921–22.

CHICAGO.<sup>1</sup>

| Crop year.        | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | Weighted average. |
|-------------------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|-------------------|
| 1910–11.....      | \$0.35  | \$0.34     | \$0.32   | \$0.32    | \$0.32    | \$0.33   | \$0.31    | \$0.31 | \$0.32 | \$0.34 | \$0.39 | \$0.44 | \$0.33            |
| 1911–12.....      | .41     | .45        | .47      | .48       | .47       | .50      | .52       | .53    | .57    | .55    | .53    | .49    | .50               |
| 1912–13.....      | .33     | .33        | .33      | .32       | .33       | .33      | .33       | .32    | .35    | .38    | .40    | .40    | .35               |
| 1913–14.....      | .42     | .43        | .40      | .40       | .40       | .39      | .39       | .39    | .39    | .40    | .40    | .37    | .40               |
| 1914–15.....      | .42     | .48        | .46      | .48       | .49       | .53      | .58       | .57    | .57    | .54    | .49    | .53    | .50               |
| 1915–16.....      | .41     | .34        | .38      | .36       | .42       | .48      | .45       | .42    | .44    | .43    | .39    | .41    | .41               |
| 1916–17.....      | .44     | .46        | .49      | .55       | .53       | .57      | .56       | .61    | .69    | .70    | .67    | .78    | .54               |
| 1917–18.....      | .61     | .60        | .60      | .65       | .77       | .82      | .89       | .93    | .89    | .77    | .77    | .77    | .71               |
| 1918–19.....      | .70     | .72        | .69      | .72       | .72       | .65      | .58       | .63    | .70    | .69    | .70    | .78    | .70               |
| 1919–20.....      | .73     | .68        | .70      | .73       | .82       | .86      | .86       | .93    | 1.01   | 1.09   | 1.13   | .91    | .80               |
| 1920–21.....      | .70     | .62        | .54      | .51       | .48       | .44      | .42       | .42    | .36    | .39    | .37    | .34    | .51               |
| 1921–22.....      | .32     | .35        | .31      | .33       | .34       |          |           |        |        |        |        |        |                   |
| 11 year average.. | .50     | .50        | .49      | .50       | .52       | .54      | .54       | .55    | .57    | .57    | .57    | .57    | .52               |

ST. LOUIS.<sup>2</sup>

| Crop year.        | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | Weighted average. |
|-------------------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|-------------------|
| 1910–11.....      | \$0.35  | \$0.34     | \$0.32   | \$0.31    | \$0.34    | \$0.33   | \$0.32    | \$0.26 | \$0.34 | \$0.34 | \$0.40 | \$0.29 | \$0.33            |
| 1911–12.....      | .43     | .45        | .46      | .48       | .48       | .51      | .52       | .54    | .57    | .56    | .53    | .45    | .49               |
| 1912–13.....      | .40     | .33        | .37      | .32       | .34       | .34      | .34       | .33    | .35    | .39    | .38    | .40    | .36               |
| 1913–14.....      | .40     | .42        | .41      | .40       | .41       | .39      | .40       | .40    | .39    | .40    | .40    | .37    | .40               |
| 1914–15.....      | .41     | .49        | .45      | .48       | .50       | .54      | .58       | .58    | .57    | .53    | .48    | .53    | .50               |
| 1915–16.....      | .41     | .37        | .36      | .37       | .42       | .47      | .46       | .43    | .45    | .48    | .40    | .41    | .42               |
| 1916–17.....      | .43     | .46        | .49      | .56       | .55       | .57      | .58       | .62    | .69    | .70    | .68    | .77    | .59               |
| 1917–18.....      | .60     | .59        | .58      | .67       | .76       | .84      | .90       | .93    | .89    | .78    | .78    | .76    | .75               |
| 1918–19.....      | .70     | .71        | .71      | .71       | .76       | .66      | .60       | .65    | .72    | .70    | .70    | .77    | .69               |
| 1919–20.....      | .74     | .79        | .71      | .74       | .83       | .89      | .88       | .90    | .94    | 1.13   | 1.12   | 1.00   | .89               |
| 1920–21.....      | .73     | .63        | .55      | .52       | .50       | .45      | .44       | .43    | .38    | .40    | .35    | .36    | .61               |
| 1921–22.....      | .32     | .36        | .32      | .33       | .35       |          |           |        |        |        |        |        |                   |
| 11 year average.. | .51     | .51        | .50      | .51       | .54       | .54      | .55       | .54    | .57    | .58    | .57    | .56    | .54               |

<sup>1</sup> Compiled from Chicago Daily Trade Bulletin.<sup>2</sup> Compiled from St. Louis Daily Market Reporter.

## OATS—Continued.

TABLE 55.—Oats: Monthly and yearly average price per bushel of reported sales of No. 3 white, 1910-11 to 1921-22—Continued.

OMAHA.<sup>1</sup>

| Crop year.                 | August.          | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | Weighted average. |
|----------------------------|------------------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|-------------------|
| 1917-18.....               | ( <sup>4</sup> ) | \$0.58     | \$0.57   | \$0.72    | \$0.76    | \$0.81   | \$0.88    | \$0.88 | \$0.87 | \$0.80 | \$0.74 | \$0.73 | \$0.78            |
| 1918-19.....               | \$0.68           | .70        | .66      | .69       | .70       | .64      | .58       | .62    | .60    | .68    | .66    | .74    | .67               |
| 1919-20.....               | .71              | .66        | .67      | .72       | .80       | .85      | .86       | .89    | .99    | 1.08   | 1.10   | .93    | .84               |
| 1920-21.....               | .68              | .60        | .52      | .46       | .46       | .42      | .39       | .40    | .34    | .37    | .34    | .33    | .48               |
| 1921-22 <sup>5</sup> ..... | .29              | .32        | .28      | .29       | .30       | .....    | .....     | .....  | .....  | .....  | .....  | .....  | .....             |

KANSAS CITY.<sup>2</sup>

| Crop year.        | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | Weighted average. |
|-------------------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|-------------------|
| 1910-11.....      | \$0.34  | \$0.33     | \$0.32   | \$0.32    | \$0.32    | \$0.32   | \$0.31    | \$0.30 | \$0.32 | \$0.32 | \$0.39 | \$0.43 | \$0.34            |
| 1911-12.....      | .41     | .46        | .49      | .48       | .48       | .50      | .53       | .53    | .57    | .54    | .52    | .44    | .50               |
| 1912-13.....      | .34     | .33        | .32      | .34       | .33       | .33      | .39       | .36    | .48    | .40    | .40    | .38    | .37               |
| 1913-14.....      | .40     | .47        | .45      | .47       | .47       | .34      | .33       | .33    | .35    | .36    | .39    | .37    | .40               |
| 1914-15.....      | .47     | .47        | .45      | .47       | .48       | .53      | .56       | .57    | .55    | .54    | .46    | .51    | .54               |
| 1915-16.....      | .38     | .35        | .36      | .39       | .42       | .44      | .47       | .43    | .44    | .43    | .39    | .45    | .40               |
| 1916-17.....      | .45     | .46        | .48      | .55       | .54       | .56      | .58       | .63    | .71    | .71    | .67    | .75    | .68               |
| 1917-18.....      | .59     | .60        | .60      | .67       | .76       | .83      | .90       | .91    | .91    | .77    | .72    | .74    | .72               |
| 1918-19.....      | .74     | .72        | .70      | .69       | .72       | .67      | .61       | .66    | .71    | .71    | .70    | .69    | .66               |
| 1919-20.....      | .73     | .66        | .69      | .74       | .81       | .87      | .89       | .92    | 1.06   | 1.12   | 1.11   | .91    | .83               |
| 1920-21.....      | .72     | .63        | .55      | .51       | .49       | .46      | .43       | .43    | .37    | .40    | .37    | .35    | .50               |
| 1921-22.....      | .32     | .35        | .31      | .32       | .33       | .....    | .....     | .....  | .....  | .....  | .....  | .....  | .....             |
| 11 year average.. | .51     | .50        | .49      | .51       | .53       | .52      | .55       | .55    | .59    | .57    | .56    | .55    | .53               |

MINNEAPOLIS.<sup>3</sup>

| Crop year.        | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | Weighted average. |
|-------------------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|-------------------|
| 1910-11.....      | \$0.35  | \$0.36     | \$0.30   | \$0.31    | \$0.30    | \$0.31   | \$0.29    | \$0.29 | \$0.32 | \$0.33 | \$0.37 | \$0.42 | \$0.33            |
| 1911-12.....      | .41     | .44        | .46      | .46       | .48       | .48      | .50       | .52    | .51    | .54    | .50    | .47    | .47               |
| 1912-13.....      | .30     | .31        | .31      | .29       | .30       | .31      | .31       | .32    | .32    | .35    | .38    | .38    | .33               |
| 1913-14.....      | .40     | .40        | .37      | .37       | .37       | .36      | .36       | .37    | .36    | .38    | .38    | .35    | .38               |
| 1914-15.....      | .42     | .46        | .44      | .40       | .46       | .52      | .56       | .56    | .55    | .52    | .46    | .50    | .48               |
| 1915-16.....      | .37     | .33        | .34      | .35       | .40       | .46      | .45       | .41    | .42    | .42    | .38    | .38    | .38               |
| 1916-17.....      | .44     | .44        | .47      | .53       | .49       | .55      | .56       | .60    | .67    | .69    | .66    | .75    | .52               |
| 1917-18.....      | .55     | .58        | .58      | .62       | .76       | .81      | .88       | .92    | .88    | .74    | .75    | .74    | .71               |
| 1918-19.....      | .68     | .69        | .65      | .69       | .69       | .64      | .56       | .60    | .68    | .66    | .66    | .74    | .66               |
| 1919-20.....      | .70     | .65        | .67      | .69       | .80       | .83      | .82       | .89    | 1.08   | 1.05   | 1.15   | .94    | .80               |
| 1920-21.....      | .66     | .58        | .51      | .47       | .44       | .41      | .39       | .39    | .33    | .36    | .34    | .34    | .48               |
| 1921-22.....      | .31     | .33        | .28      | .29       | .30       | .....    | .....     | .....  | .....  | .....  | .....  | .....  | .....             |
| 11 year average.. | .48     | .51        | .48      | .48       | .50       | .50      | .52       | .53    | .58    | .55    | .54    | .54    | .50               |

<sup>1</sup> Compiled from Omaha Daily Price Current.<sup>2</sup> Compiled from Kansas City Daily Price Current.<sup>3</sup> No report.<sup>4</sup> Compiled from Minneapolis Daily Market Record.<sup>5</sup> Prices for part of month.

TABLE 56.—Oats: Ratio of price of No. 3 yellow corn to No. 3 white oats, Chicago, 1910-11 to 1920-21.

| Crop year.   | Aug.  | Sept. | Oct.  | Nov. | Dec. | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. |
|--------------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1910-11..... | ..... | 1.5   | ..... | 1.5  | 1.4  | 1.4   | 1.5   | 1.5   | 1.6   | 1.6   | 1.4   | 1.4   |
| 1911-12..... | 1.6   | 1.5   | 1.6   | 1.4  | 1.3  | 1.2   | 1.2   | 1.3   | 1.4   | 1.4   | 1.4   | 1.4   |
| 1912-13..... | 2.3   | 2.2   | 2.0   | 1.6  | 1.4  | 1.4   | 1.5   | 1.5   | 1.6   | 1.5   | 1.5   | 1.6   |
| 1913-14..... | 1.8   | 1.7   | 1.8   | 1.8  | 1.7  | 1.6   | 1.6   | 1.6   | 1.7   | 1.8   | 1.8   | 1.9   |
| 1914-15..... | 2.0   | 1.6   | 1.6   | 1.4  | 1.3  | 1.3   | 1.3   | 1.3   | 1.3   | 1.4   | 1.5   | 1.5   |
| 1915-16..... | 2.0   | 2.2   | 1.8   | 1.8  | 1.6  | 1.5   | 1.6   | 1.7   | 1.7   | 1.7   | 1.9   | 2.0   |
| 1916-17..... | 1.9   | 1.9   | 2.0   | 1.8  | 1.7  | 1.7   | 1.8   | 1.8   | 2.0   | 2.3   | 2.5   | 2.6   |
| 1917-18..... | 3.4   | 3.5   | 3.4   | 3.4  | 2.3  | 2.2   | 2.0   | 1.8   | 1.9   | 2.1   | 2.1   | 2.2   |
| 1918-19..... | 2.5   | 2.3   | 2.0   | 1.8  | 2.0  | 2.2   | 2.3   | 2.4   | 2.3   | 2.5   | 2.5   | 2.5   |
| 1919-20..... | 2.6   | 2.2   | 2.0   | 2.0  | 1.8  | 1.8   | 1.7   | 1.7   | 1.7   | 1.9   | 1.7   | 1.7   |
| 1920-21..... | 2.3   | 2.1   | 1.7   | 1.5  | 4.5  | 1.5   | 1.5   | 1.5   | 1.6   | 1.5   | 1.7   | 1.8   |
| 1921-22..... | 1.8   | 1.5   | 1.5   | 1.4  | 1.3  | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Average..... | 2.2   | 2.1   | 1.9   | 1.8  | 1.6  | 1.6   | 1.6   | 1.6   | 1.7   | 1.8   | 1.8   | 1.9   |



## OATS—Continued.

TABLE 57.—Oats: Monthly and yearly receipts and shipments, 11 primary markets, 1910-11 to 1921-22.<sup>1</sup>

[In thousands of bushels; i. e., 000 omitted.]

| Crop year.           | Chicago.  |            | Milwaukee. |            | Minneapolis. |            | Duluth.   |            | St. Louis. |            | Toledo.   |            | Detroit.  |            | Kansas City. |            | Peoria.   |            | Omaha.    |            | Indianapolis. |            | Total.    |            |
|----------------------|-----------|------------|------------|------------|--------------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|--------------|------------|-----------|------------|-----------|------------|---------------|------------|-----------|------------|
|                      | Receipts. | Shipments. | Receipts.  | Shipments. | Receipts.    | Shipments. | Receipts. | Shipments. | Receipts.  | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts.    | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts.     | Shipments. | Receipts. | Shipments. |
| 1910-11.....         | 107,902   | 89,705     | 14,844     | 14,873     | 18,419       | 12,845     | 2,494     | 2,824      | 20,517     | 15,323     | 3,769     | 3,435      | 3,073     | 265        | 6,280        | 4,066      | 10,130    | 10,895     | (2)       | (2)        | (2)           | (2)        | 187,306   | 155,231    |
| 1911-12.....         | 87,623    | 70,000     | 863        | 8,194      | 10,555       | 10,043     | 4,630     | 4,633      | 16,879     | 11,280     | 2,872     | 2,611      | 2,752     | 348        | 6,018        | 5,071      | 6,658     | 8,737      | 8,368     | 9,253      | 976           | 394        | 158,568   | 130,605    |
| 1912-13.....         | 177,031   | 116,275    | 15,262     | 20,180     | 19,031       | 15,397     | 9,360     | 8,331      | 23,785     | 16,592     | 3,637     | 4,365      | 3,535     | 514        | 7,704        | 7,823      | 11,447    | 13,168     | 14,953    | 14,802     | 8,136         | 2,376      | 294,938   | 221,063    |
| 1913-14.....         | 105,738   | 98,141     | 15,434     | 17,172     | 22,935       | 24,272     | 5,765     | 5,761      | 25,967     | 19,497     | 3,655     | 2,819      | 3,807     | 649        | 11,335       | 11,032     | 12,153    | 13,804     | 15,077    | 13,575     | 5,392         | 1,308      | 231,237   | 214,580    |
| 1914-15.....         | 143,813   | 130,668    | 29,932     | 31,179     | 22,042       | 22,147     | 9,065     | 8,235      | 21,419     | 16,240     | 6,066     | 5,089      | 4,028     | 1,123      | 7,338        | 6,107      | 11,189    | 11,726     | 13,048    | 13,916     | 5,828         | 4,349      | 275,338   | 252,139    |
| 1915-16.....         | 151,108   | 122,263    | 35,252     | 34,389     | 45,778       | 45,054     | 4,844     | 4,233      | 17,513     | 11,636     | 4,707     | 3,501      | 5,173     | 2,392      | 4,882        | 2,582      | 11,364    | 11,838     | 11,421    | 10,981     | 13,797        | 8,877      | 305,904   | 257,708    |
| 1916-17.....         | 145,075   | 108,152    | 82,707     | 28,649     | 31,322       | 23,075     | 3,184     | 3,493      | 24,610     | 13,940     | 4,926     | 2,653      | 3,911     | 934        | 10,699       | 10,139     | 15,582    | 11,049     | 13,216    | 17,892     | 14,805        | 10,801     | 302,473   | 235,847    |
| 1917-18.....         | 134,310   | 86,725     | 31,766     | 20,128     | 42,017       | 42,181     | 766       | 680        | 37,431     | 32,139     | 5,363     | 3,194      | 3,677     | 607        | 18,944       | 12,826     | 20,170    | 17,641     | 28,673    | 21,045     | 19,822        | 13,703     | 337,279   | 251,661    |
| 1918-19.....         | 115,714   | 83,719     | 34,727     | 30,548     | 37,031       | 33,019     | 2,683     | 2,779      | 30,812     | 23,886     | 9,010     | 8,820      | 8,179     | 1,756      | 16,688       | 11,343     | 8,435     | 8,212      | 20,661    | 20,559     | 14,820        | 4,516      | 288,840   | 228,706    |
| 1919-20.....         | 82,141    | 60,792     | 26,572     | 17,706     | 17,054       | 19,033     | 1,065     | 1,694      | 31,391     | 22,772     | 3,221     | 1,601      | 2,418     | 551        | 7,615        | 5,180      | 10,636    | 13,003     | 12,110    | 13,969     | 4,023         | 239,070    | 158,008   |            |
| 1920-21.....         | 79,430    | 54,598     | 19,065     | 13,297     | 26,003       | 14,600     | 6,241     | 453        | 30,106     | 21,857     | 5,848     | 2,339      | 3,345     | 759        | 7,137        | 5,132      | 9,176     | 7,968      | 10,223    | 8,423      | 16,509        | 6,099      | 213,080   | 134,966    |
| 11-year average..... | 111,820   | 92,866     | 24,636     | 21,480     | 26,659       | 24,038     | 4,531     | 3,556      | 25,494     | 19,057     | 4,814     | 3,674      | 3,991     | 890        | 15,763       | 7,303      | 11,365    | 11,686     | 13,697    | 13,449     | 10,377        | 5,213      | 255,824   | 108,640    |

| Month.         | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. | Receipts. | Shipments. |
|----------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| 1920.          |           |            |           |            |           |            |           |            |           |            |           |            |           |            |
| August.....    | 9,637     | 4,702      | 3,317     | 1,605      | 2,265     | 1,221      | 22        | 1,356      | 1,306     | 695        | 46        | 294        | 12        | 890        |
| September..... | 9,697     | 3,856      | 3,951     | 1,631      | 4,398     | 1,809      | 1,356     | 1,423      | 1,694     | 1,423      | 232       | 235        | 177       | 896        |
| October.....   | 6,551     | 3,235      | 1,260     | 2,098      | 4,401     | 1,704      | 703       | 1,041      | 2,200     | 1,130      | 934       | 294        | 107       | 886        |
| November.....  | 4,473     | 3,558      | 1,421     | 1,457      | 1,870     | 1,058      | 209       | 306        | 1,918     | 1,033      | 283       | 173        | 52        | 724        |
| December.....  | 4,559     | 3,903      | 1,042     | 1,255      | 1,949     | 1,369      | 252       | 280        | 1,865     | 1,354      | 173       | 264        | 68        | 475        |
| 1921.          |           |            |           |            |           |            |           |            |           |            |           |            |           |            |
| January.....   | 5,239     | 4,200      | 1,040     | 879        | 3,099     | 1,430      | 598       | 1,000      | 1,928     | 314        | 230       | 284        | 86        | 725        |
| February.....  | 3,500     | 3,208      | 513       | 461        | 1,404     | 1,031      | 850       | 1,000      | 1,638     | 716        | 137       | 161        | 44        | 418        |
| March.....     | 6,039     | 5,053      | 1,030     | 768        | 1,449     | 1,072      | 571       | 1,000      | 1,439     | 3,012      | 244       | 182        | 68        | 857        |
| April.....     | 4,228     | 5,335      | 833       | 949        | 535       | 1,016      | 254       | 1,000      | 1,467     | 1,316      | 412       | 226        | 54        | 203        |
| May.....       | 5,254     | 5,775      | 1,000     | 601        | 686       | 1,538      | 318       | 1,000      | 1,616     | 308        | 248       | 203        | 78        | 342        |
| June.....      | 9,908     | 6,183      | 2,706     | 822        | 1,885     | 1,738      | 602       | 1,000      | 2,360     | 1,887      | 286       | 248        | 24        | 408        |
| July.....      | 10,249    | 4,800      | 2,208     | 701        | 3,301     | 1,424      | 202       | 1,000      | 2,052     | 1,185      | 127       | 227        | 36        | 489        |
| August.....    | 10,662    | 5,845      | 3,893     | 2,471      | 6,739     | 1,733      | 1,135     | 1,000      | 2,515     | 1,922      | 531       | 366        | 72        | 1,701      |
| September..... | 6,605     | 5,607      | 1,768     | 1,852      | 4,281     | 1,809      | 834       | 1,000      | 2,423     | 351        | 229       | 196        | 10        | 924        |
| October.....   | 6,605     | 5,536      | 2,651     | 1,832      | 4,685     | 1,908      | 517       | 1,000      | 2,494     | 1,909      | 184       | 190        | 8         | 649        |
| November.....  | 5,720     | 3,298      | 1,265     | 1,311      | 1,830     | 1,618      | 205       | 1,000      | 1,038     | 894        | 124       | 190        | 8         | 329        |
| December.....  | 4,324     | 3,369      | 1,265     | 1,808      | 2,232     | 1,591      | 305       | 1,000      | 1,538     | 894        | 120       | 190        | 28        | 316        |

\* No report.

Compiled from Chicago Daily Trade Bulletin and Board of Trade Reports.



## OATS—Continued.

TABLE 60.—Oats, including oatmeal: International trade, calendar years, 1911-1920.

| Country.                              | Average, 1911-1913.   |                       | 1918                  |                       | 1919                  |                       | 1920                  |                       |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                       | Imports.              | Exports.              | Imports.              | Exports.              | Imports.              | Exports.              | Imports.              | Exports.              |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> | <i>1,000 bushels.</i> |
| Algeria.....                          | 93                    | 1,296                 | ( <sup>1</sup> )      | 6                     | 73                    | 5,438                 | 3,670                 | 1,891                 |
| Argentina.....                        | 54                    | 52,754                |                       | 37,347                | 19                    | 22,958                |                       |                       |
| Bulgaria.....                         | 53                    | 278                   |                       |                       |                       |                       |                       | 699                   |
| Canada.....                           | 117                   | 16,583                | 3,767                 | 24,024                | 3,285                 | 16,346                | 1,847                 | 16,909                |
| China.....                            | 48                    | 484                   | ( <sup>1</sup> )      | 70                    | 1                     | 238                   | 42                    | 435                   |
| Chile.....                            |                       | 2,499                 | 30                    | 496                   | 20                    | 1,835                 | 31                    | 196                   |
| Rumania.....                          | 76                    | 10,012                |                       |                       | 330                   |                       |                       | 2,436                 |
| Russia.....                           | 1,643                 | 65,279                |                       |                       |                       |                       |                       |                       |
| United States.....                    | 6,557                 | 12,592                | 45                    | 131,085               | 19                    | 67,570                | 6,728                 | 16,540                |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                       |                       |                       |                       |                       |                       |                       |                       |
| Austria-Hungary.....                  | 3,426                 | 237                   |                       |                       |                       |                       |                       | 109                   |
| Belgium.....                          | 8,845                 | 59                    |                       |                       | 3,948                 | 33                    | 4,588                 | 9                     |
| Denmark.....                          | 4,126                 | 151                   | ( <sup>1</sup> )      | 1                     | 509                   | 37                    | 91                    | 25                    |
| Cuba.....                             | 1,361                 |                       | 1,649                 |                       | 1,192                 |                       |                       |                       |
| Finland.....                          | 1,187                 | 433                   | 57                    |                       | 114                   | 4                     | 265                   |                       |
| France.....                           | 30,746                | 122                   | 35,010                | 31                    | 31,632                | 65                    | 18,133                | 4,876                 |
| Germany.....                          | 41,320                | 30,844                |                       |                       |                       |                       | 243                   | 265                   |
| Italy.....                            | 9,040                 | 104                   | 19,255                | 3                     | 12,046                | 184                   | 3,147                 | 1                     |
| Netherlands.....                      | 41,901                | 33,814                | 1                     | ( <sup>1</sup> )      | 2,870                 | 127                   | 2,080                 | 433                   |
| Norway.....                           | 698                   | 39                    | 11                    |                       | ( <sup>1</sup> )      | 736                   | 14                    | 183                   |
| Philippine Islands.....               | 486                   |                       | 53                    |                       | 106                   |                       | 100                   |                       |
| Sweden.....                           | 6,055                 | 2,342                 | 365                   | ( <sup>1</sup> )      | 1,605                 | 36                    | 14                    | 595                   |
| Switzerland.....                      | 12,484                | 15                    | 2,142                 | 2                     | 6,334                 | 3                     | 3,704                 | 16                    |
| United Kingdom.....                   | 64,755                | 1,411                 | 55,595                | 107                   | 29,944                | 3,713                 | 24,862                |                       |
| Other countries.....                  | 1,976                 | 3,151                 | 524                   | 3,437                 | 585                   | 4,457                 | 1,052                 | 1,600                 |
| <b>Total.....</b>                     | <b>236,047</b>        | <b>234,499</b>        | <b>118,510</b>        | <b>208,503</b>        | <b>94,702</b>         | <b>323,780</b>        | <b>70,091</b>         | <b>49,256</b>         |

<sup>1</sup> Less than 500.<sup>2</sup> One year<sup>3</sup> Two-year average.<sup>4</sup> Austria only, new boundaries.

## BARLEY.

TABLE 61.—*Barley: Area and production of undermentioned countries, 1909-1921.*

| Country.                  | Area.                              |                         |                         |                         | Production.                        |                           |                           |                           |
|---------------------------|------------------------------------|-------------------------|-------------------------|-------------------------|------------------------------------|---------------------------|---------------------------|---------------------------|
|                           | Average<br>1909-1913. <sup>1</sup> | 1919                    | 1920                    | 1921                    | Average<br>1909-1913. <sup>1</sup> | 1919                      | 1920                      | 1921                      |
| <b>NORTH AMERICA.</b>     | <i>1,000<br/>acres.</i>            | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>bushels.</i>          | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| United States.....        | 7,619                              | 6,720                   | 7,600                   | 7,240                   | 181,881                            | 147,608                   | 189,832                   | 151,181                   |
| <b>Canada:</b>            |                                    |                         |                         |                         |                                    |                           |                           |                           |
| New Brunswick.....        | 3                                  | 11                      | 8                       | 9                       | 79                                 | 235                       | 194                       | 151                       |
| Quebec.....               | 99                                 | 235                     | 194                     | 192                     | 2,352                              | 5,344                     | 4,910                     | 4,073                     |
| Ontario.....              | 587                                | 569                     | 494                     | 482                     | 17,017                             | 13,134                    | 16,660                    | 10,149                    |
| Manitoba.....             | 561                                | 894                     | 899                     | 1,043                   | 15,954                             | 17,149                    | 17,520                    | 19,682                    |
| Saskatchewan.....         | 234                                | 493                     | 519                     | 498                     | 7,350                              | 8,971                     | 10,502                    | 13,243                    |
| Alberta.....              | 185                                | 414                     | 481                     | 568                     | 5,364                              | 10,582                    | 12,739                    | 11,657                    |
| Other.....                | 14                                 | 30                      | 27                      | 24                      | 385                                | 944                       | 786                       | 654                       |
| Total Canada.....         | 1,683                              | 2,646                   | 2,552                   | 2,796                   | 48,532                             | 56,389                    | 63,311                    | 59,709                    |
| <b>Mexico.....</b>        |                                    |                         |                         |                         | 6,666                              |                           |                           |                           |
| Total North America.....  | 9,302                              |                         |                         |                         | 237,079                            |                           |                           |                           |
| <b>SOUTH AMERICA.</b>     |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Argentina.....            | 268                                |                         | 615                     | 667                     | 3,626                              |                           | 10,279                    | 11,161                    |
| Chile.....                | 117                                | 98                      |                         | 139                     | 3,924                              |                           | 3,977                     | 5,385                     |
| Uruguay.....              | 4                                  |                         | 5                       | 11                      | 61                                 | 3,977                     | 72                        | 189                       |
| Total South America.....  | 389                                |                         |                         | 817                     | 7,611                              |                           | 14,338                    | 16,715                    |
| <b>EUROPE.</b>            |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Austria.....              | * 2,712                            | 233                     | 233                     | 267                     | * 71,988                           | 3,822                     | 4,392                     | 5,201                     |
| Croatia-Slavonia *.....   | 158                                |                         |                         |                         | 2,549                              |                           |                           |                           |
| Bosnia-Herzegovina *..... | 214                                |                         |                         |                         | 3,455                              |                           |                           |                           |
| Belgium.....              | 85                                 | 78                      | 90                      | 91                      | 4,247                              | 3,617                     | 4,350                     | 3,939                     |
| Bulgaria.....             | * 616                              | * 474                   | 545                     | 551                     | * 12,426                           | 10,371                    | 13,928                    | 13,241                    |
| Czechoslovakia.....       |                                    | 399                     | 1,711                   | 1,583                   |                                    | * 21,568                  | 37,238                    | 47,364                    |
| Denmark.....              | 591                                | 586                     | 628                     | 628                     | 22,539                             | 24,523                    | 24,707                    | 27,393                    |
| Finland.....              |                                    | 293                     | 293                     | 296                     | 5,737                              | 5,295                     | 4,983                     | 4,939                     |
| France.....               | * 1,896                            | 1,502                   | 1,641                   | 1,653                   | * 46,439                           | 26,235                    | 35,332                    | 37,804                    |
| Germany.....              | * 3,976                            | * 2,782                 | * 2,949                 | * 2,808                 | * 153,529                          | * 76,685                  | * 82,344                  | * 89,066                  |
| Greece.....               | 195                                | 300                     | 581                     |                         | 8,692                              | 7,026                     | 6,430                     |                           |
| Hungary Proper.....       | * 2,760                            |                         | 1,266                   | 1,187                   | * 69,812                           | 22,585                    | 20,592                    |                           |
| Italy.....                | 613                                | 480                     | 494                     | 541                     | 10,104                             | 8,327                     | 5,870                     | 10,362                    |
| Yugoslavia.....           |                                    |                         | 1,181                   |                         |                                    | 20,446                    | 20,650                    | * 12,401                  |
| Luxemburg.....            | 3                                  | 6                       | 5                       | 5                       | 82                                 |                           | 105                       | 96                        |
| Netherlands.....          | 68                                 | 57                      | 56                      | 62                      | 3,270                              | 2,688                     | 2,743                     | 3,651                     |
| Norway.....               | 89                                 | 156                     | 156                     | 156                     | 2,867                              | 5,275                     | 5,382                     | 4,310                     |
| Rumania.....              | * 1,319                            | * 1,943                 | 3,385                   | 3,280                   | * 21,821                           | * 31,641                  | 63,203                    | 49,558                    |
| Russia Proper *.....      | 23,075                             |                         |                         |                         | 372,856                            |                           |                           |                           |
| Poland.....               | * 1,249                            | * 1,315                 | 1,944                   | 2,429                   | * 27,150                           | * 35,917                  | 39,309                    | 53,305                    |
| Northern Caucasias *..... | 3,735                              |                         |                         |                         | 67,191                             |                           |                           |                           |
| Serbia *.....             | 242                                |                         |                         |                         | 5,072                              |                           |                           |                           |
| Spain.....                | 3,509                              | 4,254                   | 4,319                   | 4,261                   | 74,689                             | 81,806                    | 90,462                    | 89,320                    |
| Sweden.....               | 451                                | 412                     | 402                     | 402                     | 14,592                             | 12,892                    | 11,023                    | 11,804                    |
| Switzerland.....          |                                    | 19                      | 18                      | 16                      |                                    | 625                       | 620                       | 552                       |
| <b>United Kingdom:</b>    |                                    |                         |                         |                         |                                    |                           |                           |                           |
| England.....              | 1,400                              | 1,406                   | 1,538                   | 1,356                   | 47,352                             | 40,592                    | 47,856                    | 40,552                    |
| Wales.....                | 83                                 | 104                     | 99                      | 80                      | 2,812                              | 3,200                     | 2,824                     | 1,920                     |
| Scotland.....             | 191                                | 174                     | 204                     | 171                     | 7,103                              | 6,112                     | 7,784                     | 6,153                     |
| Ireland.....              | 165                                | 187                     | 207                     | 175                     | 7,493                              | 7,800                     | 7,527                     | 5,952                     |
| Total United Kingdom..... | 1,844                              | 1,871                   | 2,048                   | 1,782                   | 64,760                             | 57,704                    | 65,991                    | 54,528                    |
| <b>Total Europe.....</b>  | 49,370                             |                         |                         |                         | 1,063,857                          |                           |                           |                           |
| <b>ASIA.</b>              |                                    |                         |                         |                         |                                    |                           |                           |                           |
| British India.....        | 7,836                              | 6,394                   | 7,415                   |                         | 40,973                             | 129,827                   | 140,380                   |                           |
| Cyprus.....               |                                    |                         |                         |                         | 2,151                              | * 2,393                   | * 3,500                   |                           |

<sup>1</sup> Five-year average except in a few cases where statistics were unavailable.

\* Old boundaries.

\* Bohemia, Moravia, and Silesia.

\* Summer barley only.

\* Unofficial.

\* Former Kingdom, Bessarabia, and Bukovina.

\* Former Russian Poland, Former and Western Galicia and Posen.

BARLEY—Continued.

TABLE 61.—Barley: Area and production of undermentioned countries, 1909-1921—Continued.

| Country.                   | Area.              |              |              |              | Production.        |                |                |                |
|----------------------------|--------------------|--------------|--------------|--------------|--------------------|----------------|----------------|----------------|
|                            | Average 1909-1913. | 1919         | 1920         | 1921         | Average 1909-1913. | 1919           | 1920           | 1921           |
| <b>ASIA—Continued.</b>     |                    |              |              |              |                    |                |                |                |
| Japanese Empire:           | 1,000 acres.       | 1,000 acres. | 1,000 acres. | 1,000 acres. | 1,000 bushels.     | 1,000 bushels. | 1,000 bushels. | 1,000 bushels. |
| Japan.....                 | 3,183              | 2,893        | 2,987        | .....        | 89,528             | 89,356         | 92,140         | 89,898         |
| Formosa.....               | 5                  | .....        | .....        | .....        | 53                 | .....          | .....          | .....          |
| Korea.....                 | 843                | .....        | .....        | .....        | 19,436             | 26,480         | .....          | .....          |
| Total Japanese Empire..... | 4,031              | .....        | .....        | .....        | 108,017            | .....          | .....          | .....          |
| Russia (Asiatic).....      | 829                | .....        | .....        | .....        | 11,171             | .....          | .....          | .....          |
| Total Asia.....            | 12,606             | .....        | .....        | .....        | 163,312            | .....          | .....          | .....          |
| <b>AFRICA.</b>             |                    |              |              |              |                    |                |                |                |
| Algeria.....               | 2,353              | 2,640        | 2,795        | 2,508        | 41,961             | 33,667         | 29,932         | 50,491         |
| Egypt.....                 | 394                | 357          | 340          | 374          | .....              | 10,283         | 10,449         | 11,371         |
| Morocco.....               | .....              | 1,522        | 2,341        | 1,905        | .....              | 26,394         | 39,645         | 20,510         |
| Tunis.....                 | 1,145              | 1,106        | 927          | 1,230        | 7,900              | 5,511          | 2,618          | 11,482         |
| Union of South Africa..... | .....              | 55           | 99           | 91           | 2,015              | 1,058          | 749            | 1,137          |
| Total Africa.....          | .....              | 5,681        | 6,562        | 6,108        | .....              | 76,913         | 83,393         | 103,991        |
| <b>AUSTRALASIA.</b>        |                    |              |              |              |                    |                |                |                |
| Australia:                 | .....              | .....        | .....        | .....        | .....              | .....          | .....          | .....          |
| Queensland.....            | 7                  | 1            | 3            | .....        | 119                | 9              | 35             | .....          |
| New South Wales.....       | 12                 | 8            | 5            | .....        | 204                | 86             | 39             | .....          |
| Victoria.....              | 60                 | 180          | 86           | .....        | 1,400              | 2,029          | 1,629          | .....          |
| South Australia.....       | 46                 | 130          | 158          | .....        | 842                | 2,417          | 2,449          | .....          |
| Tasmania.....              | 6                  | 7            | 6            | .....        | 184                | 141            | 120            | .....          |
| Western Australia.....     | 6                  | 8            | 9            | .....        | 70                 | 82             | 116            | .....          |
| Total Australia.....       | 137                | 255          | 287          | .....        | 2,819              | 4,764          | 4,288          | .....          |
| New Zealand.....           | 39                 | 19           | 23           | 47           | 1,402              | 711            | 816            | 1,587          |
| Total Australasia.....     | 176                | 274          | 290          | .....        | 4,221              | 5,475          | 5,104          | .....          |
| Grand total.....           | 78,825             | .....        | .....        | .....        | 1,528,056          | .....          | .....          | .....          |

TABLE 62.—Barley: World production so far as reported, 1895-1921.

| Year.     | Production.     | Year.     | Production.     | Year.     | Production.     | Year.     | Production.     |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |
| 1895..... | 915,504,000     | 1902..... | 1,229,132,000   | 1909..... | 1,468,208,000   | 1916..... | 1,186,868,000   |
| 1896..... | 932,100,000     | 1903..... | 1,235,780,000   | 1910..... | 1,388,734,000   | 1917..... | 936,666,000     |
| 1897..... | 864,605,000     | 1904..... | 1,175,784,000   | 1911..... | 1,373,238,000   | 1918..... | 1,074,158,000   |
| 1898..... | 1,030,581,000   | 1905..... | 1,180,058,000   | 1912..... | 1,460,977,000   | 1919..... | 973,887,000     |
| 1899..... | 965,720,000     | 1906..... | 1,296,579,000   | 1913..... | 1,650,265,000   | 1920..... | 1,145,779,000   |
| 1900..... | 959,622,000     | 1907..... | 1,271,237,000   | 1914..... | 1,463,259,000   | 1921..... | 968,918,000     |
| 1901..... | 1,072,195,000   | 1908..... | 1,274,807,000   | 1915..... | 1,439,887,000   |           |                 |

## BARLEY—Continued.

TABLE 63.—Barley: Average yield per acre in undermentioned countries, 1890-1921.

| Year.          | United States.  | Russia (European). | Germany.        | Austria.        | Hungary, proper.  | France.           | United Kingdom. <sup>1</sup> |
|----------------|-----------------|--------------------|-----------------|-----------------|-------------------|-------------------|------------------------------|
| Average:       | <i>Bushels.</i> | <i>Bushels.</i>    | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>   | <i>Bushels.</i>   | <i>Bushels.</i>              |
| 1890-1899..... | 23.4            | 13.3               | 29.4            | 21.1            | .....             | <sup>1</sup> 22.6 | 39.8                         |
| 1900-1909..... | 25.5            | 14.3               | 35.3            | 26.3            | .....             | <sup>1</sup> 23.6 | 35.0                         |
| 1910-1919..... | 25.1            | <sup>2</sup> 15.6  | 33.2            | 26.3            | <sup>3</sup> 24.2 | <sup>1</sup> 23.1 | 33.6                         |
| 1919.....      | 22.0            | .....              | 27.6            | 16.4            | .....             | 17.5              | 30.8                         |
| 1920.....      | 24.9            | .....              | 27.9            | 18.5            | 17.8              | 23.4              | 32.2                         |
| 1921.....      | 20.9            | .....              | 31.7            | 19.5            | 17.4              | 22.9              | 30.6                         |

<sup>1</sup> Winchester bushels.<sup>2</sup> Seven year average.<sup>3</sup> Six year average.

TABLE 64.—Barley: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See headnote of Table 4.]

| Year.          | Acreage harvested<br>(000 omitted). | Average yield per acre. | Production (000 omitted). | Average farm price per bushel Dec. 1. | Farm value Dec. 1 (000 omitted). | Chicago, cash price per bushel, low malting to fancy. <sup>1</sup> |       |                |       | Domestic exports, fiscal year beginning July 1. | Imports, fiscal year beginning July 1. |
|----------------|-------------------------------------|-------------------------|---------------------------|---------------------------------------|----------------------------------|--|-------|----------------|-------|---|--|
|                |                                     |                         |                           |                                       |                                  | December.  |       | Following May. |       |   |  |
|                |                                     |                         |                           |                                       |                                  | Low.   | High. | Low.           | High. |   |  |
|                | Acres.                              | Bush.                   | Bushels.                  | Cents.                                | Dollars.                         | Cts.   | Cts.  | Cts.           | Cts.  | Bushels.  | Bushels.                               |
| 1849.....      |                                     |                         | 5,167                     |                                       |                                  |  |       |                |       |   |  |
| 1859.....      |                                     |                         | 15,896                    |                                       |                                  |  |       |                |       |   |  |
| 1856-1875..... | 1,196                               | 22.6                    | 26,992                    | 79.2                                  | 21,382                           | 94   | 109   | 102            | 120   | 212,563   | 5,493,794                              |
| 1876-1885..... | 2,102                               | 22.4                    | 47,029                    | 61.0                                  | 28,686                           | 75   | 82    | 73             | 77    | 1,008,254                                       | 7,686,520                              |
| 1886-1895..... | 3,490                               | 22.8                    | 79,646                    | 47.0                                  | 37,464                           | 56   | 58    | 54             | 58    | 2,597,671                                       | 5,782,846                              |
| 1896.....      | 4,172                               | 23.8                    | 99,394                    | 30.0                                  | 29,814                           | 22   | 37    | 24½            | 35    | 20,080,301                                      | 1,271,787                              |
| 1897.....      | 4,150                               | 24.9                    | 103,279                   | 35.2                                  | 36,346                           | 25½  | 42    | 36             | 53    | 11,237,077                                      | 124,804                                |
| 1898.....      | 4,237                               | 23.5                    | 99,490                    | 38.9                                  | 38,701                           | 40   | 50½   | 36             | 42    | 2,267,403                                       | 110,475                                |
| 1899.....      | 4,170                               | 26.1                    | 116,552                   | 39.0                                  | 45,479                           | 35   | 45    | 36             | 44    | 23,661,662                                      | 189,757                                |
| 1900.....      | 4,545                               | 21.1                    | 98,041                    | 40.5                                  | 38,896                           | 37   | 61    | 37             | 57    | 6,293,207                                       | 171,004                                |
| 1901.....      | 4,742                               | 25.7                    | 121,784                   | 45.2                                  | 55,068                           | 56   | 63    | 64             | 72    | 8,714,268                                       | 57,406                                 |
| 1902.....      | 5,126                               | 29.1                    | 149,389                   | 45.5                                  | 67,944                           | 36   | 70    | 48             | 56    | 8,429,141                                       | 55,462                                 |
| 1903.....      | 5,568                               | 26.4                    | 146,864                   | 45.4                                  | 66,700                           | 42   | 61½   | 38             | 59    | 10,881,627                                      | 90,708                                 |
| 1904.....      | 5,912                               | 27.4                    | 162,105                   | 41.6                                  | 67,427                           | 38   | 52    | 40             | 50    | 10,661,655                                      | 81,020                                 |
| 1905.....      | 6,250                               | 27.2                    | 170,174                   | 39.4                                  | 67,005                           | 37   | 53    | 42             | 55½   | 17,729,360                                      | 18,049                                 |
| 1906.....      | 6,730                               | 28.6                    | 192,270                   | 41.6                                  | 80,069                           | 44   | 56    | 66             | 85    | 8,238,842                                       | 38,319                                 |
| 1907.....      | 6,941                               | 24.5                    | 170,008                   | 66.3                                  | 112,675                          | 78   | 102   | 60             | 75    | 4,349,078                                       | 199,741                                |
| 1908.....      | 7,294                               | 25.3                    | 184,857                   | 55.2                                  | 102,037                          | 57   | 64½   | 66             | 75    | 6,580,393                                       | 2,644                                  |
| 1909.....      | 7,690                               | 24.4                    | 187,973                   | 54.8                                  | 102,947                          | 55   | 72    | 50             | 68    | 4,311,566                                       |  |
| 1910.....      | 7,743                               | 22.5                    | 173,892                   | 57.8                                  | 100,426                          | 72   | 90    | 75             | 115   | 9,399,346                                       |  |
| 1911.....      | 7,627                               | 21.0                    | 160,240                   | 86.9                                  | 139,182                          | 102  | 130   | 68             | 132   | 1,535,242                                       |  |
| 1912.....      | 7,530                               | 29.7                    | 223,824                   | 50.5                                  | 112,957                          | 43   | 77    | 45             | 68    | 17,536,703                                      |  |
| 1913.....      | 7,499                               | 23.8                    | 178,189                   | 53.7                                  | 95,731                           | 50   | 79    | 51             | 66    | 6,644,747                                       |  |
| 1914.....      | 7,565                               | 25.8                    | 194,953                   | 54.3                                  | 105,903                          | 60   | 75    | 74½            | 82    | 26,764,522                                      |  |
| 1915.....      | 7,148                               | 32.0                    | 228,851                   | 51.6                                  | 118,172                          | 62   | 77    | 70             | 83    | 27,473,160                                      |  |
| 1916.....      | 7,757                               | 23.5                    | 182,309                   | 88.1                                  | 160,646                          | 95   | 125   | 128            | 165   | 16,381,077                                      |  |
| 1917.....      | 8,933                               | 23.7                    | 211,759                   | 113.7                                 | 240,758                          | 125  | 163   | 105            | 176   | 26,285,378                                      |  |
| 1918.....      | 9,740                               | 26.3                    | 256,225                   | 91.7                                  | 234,942                          | 88   | 105   | 110            | 130   | 20,457,781                                      |  |
| 1919.....      | 6,720                               | 22.0                    | 147,608                   | 120.6                                 | 178,080                          | 125  | 188   | 140            | 190   | 26,571,234                                      |  |
| 1920.....      | 7,600                               | 24.9                    | 189,332                   | 71.3                                  | 135,083                          | 50   | 98    |                |       | 20,457,198                                      |  |
| 1921.....      | 7,240                               | 20.9                    | 151,181                   | 42.2                                  | 63,788                           |  |       |                |       |   |  |

<sup>1</sup> Prices 1895 to 1908 for No. 3 grade.<sup>2</sup> Acreage adjusted to census basis.<sup>3</sup> Preliminary estimate.

BARLEY—Continued.

TABLE 65.—Barley: Acreage, production, and total farm value, by States, 1919-1921.

| State.            | Thousands of acres. |       |                   | Production (thousands of bushels). |         |                   | Total value, basis Dec. 1 price (thousands of dollars). |         |                   |
|-------------------|---------------------|-------|-------------------|------------------------------------|---------|-------------------|---|---------|-------------------|
|                   | 1919                | 1920  | 1921 <sup>1</sup> | 1919                               | 1920    | 1921 <sup>1</sup> | 1919  | 1920    | 1921 <sup>1</sup> |
| Maine.....        | 4                   | 4     | 4                 | 112                                | 104     | 104               | 190   | 144     | 89                |
| New Hampshire..   | 1                   | 1     | 1                 | 25                                 | 26      | 23                | 47  | 38      | 25                |
| Vermont.....      | 9                   | 11    | 8                 | 225                                | 308     | 200               | 338   | 370     | 160               |
| New York.....     | 171                 | 170   | 158               | 3,762                              | 4,930   | 3,818             | 5,116   | 4,881   | 2,057             |
| Pennsylvania..... | 14                  | 15    | 13                | 343                                | 360     | 280               | 439   | 324     | 174               |
| Maryland.....     | 4                   | 4     | 4                 | 132                                | 110     | 120               | 162   | 121     | 89                |
| Virginia.....     | 9                   | 10    | 9                 | 225                                | 270     | 207               | 292   | 270     | 149               |
| Ohio.....         | 114                 | 102   | 97                | 2,622                              | 2,825   | 2,037             | 3,278   | 2,816   | 1,039             |
| Indiana.....      | 74                  | 81    | 65                | 1,850                              | 2,187   | 1,235             | 2,183   | 1,903   | 593               |
| Illinois.....     | 177                 | 182   | 173               | 4,779                              | 5,533   | 4,550             | 5,783   | 4,537   | 2,093             |
| Michigan.....     | 297                 | 255   | 235               | 5,049                              | 6,630   | 4,112             | 5,958   | 5,768   | 2,344             |
| Wisconsin.....    | 516                 | 502   | 478               | 13,674                             | 15,913  | 10,642            | 16,546  | 13,367  | 5,427             |
| Minnesota.....    | 814                 | 895   | 886               | 16,280                             | 22,375  | 17,720            | 18,885  | 13,872  | 6,025             |
| Iowa.....         | 236                 | 180   | 166               | 6,018                              | 4,950   | 3,901             | 6,740   | 3,118   | 1,633             |
| Missouri.....     | 9                   | 7     | 7                 | 270                                | 196     | 154               | 351   | 192     | 100               |
| North Dakota..... | 1,085               | 1,085 | 1,096             | 12,478                             | 19,530  | 16,988            | 13,476  | 10,037  | 4,927             |
| South Dakota..... | 771                 | 1,028 | 1,019             | 16,902                             | 25,700  | 17,323            | 19,506  | 13,304  | 5,024             |
| Nebraska.....     | 217                 | 258   | 199               | 5,577                              | 7,424   | 4,915             | 5,577   | 3,712   | 1,376             |
| Kansas.....       | 509                 | 767   | 660               | 13,743                             | 19,482  | 13,200            | 13,743  | 8,767   | 3,823             |
| Kentucky.....     | 6                   | 5     | 6                 | 150                                | 140     | 144               | 236   | 161     | 88                |
| Tennessee.....    | 6                   | 6     | 9                 | 120                                | 138     | 189               | 216   | 152     | 189               |
| Texas.....        | 78                  | 78    | 78                | 2,730                              | 1,794   | 1,872             | 3,058   | 1,346   | 842               |
| Oklahoma.....     | 77                  | 116   | 122               | 2,310                              | 2,784   | 2,684             | 2,818   | 2,004   | 1,208             |
| Montana.....      | 75                  | 64    | 60                | 420                                | 1,152   | 1,200             | 588   | 749     | 729               |
| Wyoming.....      | 8                   | 6     | 8                 | 120                                | 216     | 232               | 210   | 238     | 151               |
| Colorado.....     | 153                 | 216   | 202               | 2,907                              | 5,292   | 4,444             | 3,488   | 3,969   | 1,644             |
| New Mexico.....   | 10                  | 11    | 10                | 238                                | 260     | 239               | 262   | 195     | 146               |
| Arizona.....      | 25                  | 20    | 29                | 875                                | 680     | 928               | 1,225   | 952     | 742               |
| Utah.....         | 16                  | 19    | 16                | 396                                | 593     | 512               | 616   | 593     | 246               |
| Nevada.....       | 6                   | 5     | 6                 | 159                                | 150     | 187               | 238   | 248     | 159               |
| Idaho.....        | 90                  | 92    | 87                | 2,340                              | 3,220   | 2,784             | 3,276   | 2,415   | 1,308             |
| Washington.....   | 85                  | 82    | 76                | 2,550                              | 2,895   | 2,797             | 3,442   | 2,895   | 1,464             |
| Oregon.....       | 67                  | 75    | 70                | 1,548                              | 2,415   | 2,240             | 2,322   | 2,415   | 1,129             |
| California.....   | 987                 | 1,250 | 1,188             | 26,649                             | 28,750  | 29,700            | 37,575  | 28,750  | 16,032            |
| United States...  | 6,720               | 7,600 | 7,240             | 147,608                            | 180,332 | 151,181           | 178,080   | 135,083 | 63,798            |

<sup>1</sup> Preliminary estimate.

TABLE 66.—Barley: Condition of crop, United States, on first of months named, 1900-1921.

| Year.     | June.  | July.  | August. | When harvested. | Year.     | June.  | July.  | August. | When harvested. |
|-----------|--------|--------|---------|-----------------|-----------|--------|--------|---------|-----------------|
|           | P. ct. | P. ct. | P. ct.  | P. ct.          |           | P. ct. | P. ct. | P. ct.  | P. ct.          |
| 1900..... | 86.2   | 76.3   | 71.6    | 70.7            | 1911..... | 90.2   | 72.1   | 66.2    | 65.5            |
| 1901..... | 91.0   | 91.3   | 86.9    | 83.8            | 1912..... | 91.1   | 88.3   | 89.1    | 88.9            |
| 1902..... | 93.6   | 93.7   | 90.2    | 89.7            | 1913..... | 87.1   | 76.6   | 74.9    | 73.4            |
| 1903..... | 91.5   | 86.8   | 83.4    | 82.1            | 1914..... | 95.5   | 92.6   | 85.3    | 82.4            |
| 1904..... | 90.5   | 88.5   | 88.1    | 87.4            | 1915..... | 94.6   | 94.1   | 93.8    | 94.2            |
| 1905..... | 93.7   | 91.5   | 89.5    | 87.8            | 1916..... | 86.3   | 87.9   | 80.0    | 74.6            |
| 1906..... | 93.5   | 92.5   | 90.3    | 89.4            | 1917..... | 89.3   | 85.4   | 77.9    | 76.3            |
| 1907..... | 84.9   | 84.4   | 84.5    | 78.5            | 1918..... | 90.5   | 84.7   | 82.0    | 81.5            |
| 1908..... | 89.7   | 86.2   | 83.1    | 81.2            | 1919..... | 91.7   | 87.4   | 73.6    | 69.2            |
| 1909..... | 90.6   | 90.2   | 85.4    | 80.5            | 1920..... | 87.6   | 87.0   | 84.9    | 82.5            |
| 1910..... | 89.6   | 73.7   | 70.0    | 69.8            | 1921..... | 87.1   | 81.4   | 71.4    | 68.4            |



## BARLEY—Continued.

TABLE 67.—Barley: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | June.           | July.           | August.         | September.      | October production estimate. | Final estimate.      |
|--------------|-----------------|-----------------|-----------------|-----------------|------------------------------|----------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>              | <i>Bushels.</i>      |
| 1912.....    | 192,000         | 194,000         | 202,000         | 209,000         | 224,619                      | 223,824              |
| 1913.....    | 177,000         | 165,000         | 168,000         | 168,000         | 173,301                      | 178,189              |
| 1914.....    | 206,430         | 211,319         | 202,660         | 199,575         | 196,568                      | 194,963              |
| 1915.....    | 197,289         | 208,173         | 217,441         | 222,938         | 230,682                      | 228,851              |
| 1916.....    | 189,285         | 205,989         | 194,842         | 184,441         | 183,536                      | 182,309              |
| 1917.....    | 214,371         | 213,952         | 203,393         | 203,839         | 201,659                      | 211,759              |
| 1918.....    | 235,272         | 229,816         | 231,815         | 235,835         | 236,605                      | 256,225              |
| 1919.....    | 231,767         | 230,900         | 203,525         | 195,297         | 198,298                      | 147,608              |
| 1920.....    | 185,108         | 193,090         | 195,925         | 194,853         | 191,398                      | 189,332              |
| Average..... | 203,168         | 205,804         | 202,178         | 201,531         | 204,728                      | 201,450              |
| 1921.....    | 190,661         | 184,288         | 170,511         | 166,906         | 163,399                      | <sup>1</sup> 151,181 |

<sup>1</sup> Preliminary.

TABLE 68.—Barley: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.             | Yield per acre (bushels).  |      |      |      |      |      | Farm price per bushel (cents). |      |      |      |      |      |       |      |       |      |      |                            | Value per acre (dollars). <sup>1</sup> |  |
|--------------------|----------------------------|------|------|------|------|------|--------------------------------|------|------|------|------|------|-------|------|-------|------|------|----------------------------|--|--|
|                    | 5-year average, 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921 | 10-year average, 1912-1921.    | 1912 | 1913 | 1914 | 1915 | 1916 | 1917  | 1918 | 1919  | 1920 | 1921 | 5-year average, 1916-1920. | 1921                                   |  |
| Maine.....         | 25.2                       | 21.0 | 25.0 | 28.0 | 26.0 | 26.0 | 109                            | 77   | 80   | 81   | 75   | 104  | 130   | 149  | 170   | 138  | 86   | 35.01                      | 22.36                                  |  |
| New Hampshire..... | 26.2                       | 25.0 | 32.0 | 24.8 | 23.0 | 23.0 | 118                            | 84   | 80   | 82   | 79   | 90   | 175   | 150  | 188   | 146  | 110  | 40.31                      | 25.30                                  |  |
| Vermont.....       | 27.6                       | 29.0 | 31.0 | 25.0 | 23.0 | 25.0 | 105                            | 80   | 80   | 75   | 75   | 100  | 140   | 153  | 150   | 120  | 80   | 37.33                      | 20.00                                  |  |
| New York.....      | 26.3                       | 28.0 | 31.5 | 22.0 | 20.0 | 21.0 | 94                             | 68   | 69   | 71   | 75   | 101  | 130   | 126  | 136   | 99   | 62   | 31.65                      | 13.02                                  |  |
| Pennsylvania.....  | 25.2                       | 28.0 | 28.0 | 24.5 | 24.0 | 21.5 | 90                             | 68   | 71   | 70   | 75   | 75   | 140   | 120  | 128   | 90   | 62   | 28.90                      | 13.83                                  |  |
| Maryland.....      | 29.3                       | 25.0 | 31.0 | 33.0 | 27.5 | 30.0 | 89                             | 68   | 64   | 66   | 70   | 73   | 130   | 120  | 123   | 110  | 67   | 32.78                      | 20.10                                  |  |
| Virginia.....      | 26.4                       | 30.0 | 27.0 | 25.0 | 27.0 | 23.0 | 99                             | 75   | 70   | 80   | 75   | 85   | 139   | 160  | 130   | 100  | 72   | 33.56                      | 16.56                                  |  |
| Ohio.....          | 27.2                       | 33.0 | 31.5 | 23.0 | 27.7 | 21.0 | 78                             | 55   | 58   | 59   | 54   | 80   | 118   | 98   | 125   | 82   | 51   | 28.39                      | 10.71                                  |  |
| Indiana.....       | 27.7                       | 30.0 | 33.7 | 25.0 | 27.0 | 19.0 | 78                             | 60   | 50   | 67   | 65   | 75   | 104   | 104  | 118   | 87   | 48   | 28.66                      | 9.12                                   |  |
| Illinois.....      | 31.4                       | 37.5 | 36.0 | 27.0 | 30.4 | 26.8 | 79                             | 53   | 57   | 61   | 57   | 103  | 121   | 90   | 121   | 82   | 46   | 33.67                      | 12.10                                  |  |
| Michigan.....      | 23.0                       | 24.4 | 30.0 | 17.0 | 26.0 | 17.5 | 82                             | 65   | 60   | 65   | 62   | 91   | 119   | 100  | 118   | 87   | 57   | 24.80                      | 9.98                                   |  |
| Wisconsin.....     | 29.7                       | 32.0 | 35.7 | 26.5 | 31.1 | 22.5 | 81                             | 55   | 60   | 62   | 56   | 105  | 124   | 92   | 121   | 84   | 51   | 32.54                      | 11.48                                  |  |
| Minnesota.....     | 24.6                       | 37.0 | 31.0 | 20.0 | 25.0 | 20.0 | 68                             | 41   | 48   | 53   | 49   | 87   | 111   | 80   | 116   | 62   | 34   | 22.00                      | 6.80                                   |  |
| Iowa.....          | 28.6                       | 35.0 | 31.5 | 25.5 | 27.7 | 23.5 | 72                             | 52   | 55   | 55   | 49   | 91   | 117   | 85   | 112   | 63   | 42   | 28.09                      | 9.87                                   |  |
| Missouri.....      | 26.0                       | 25.0 | 25.0 | 30.0 | 23.0 | 22.0 | 85                             | 66   | 60   | 65   | 63   | 93   | 94    | 115  | 130   | 98   | 65   | 27.46                      | 14.30                                  |  |
| North Dakota.....  | 15.8                       | 12.5 | 21.5 | 11.5 | 18.0 | 15.5 | 61                             | 35   | 40   | 45   | 44   | 80   | 100   | 73   | 108   | 56   | 20   | 12.62                      | 4.50                                   |  |
| South Dakota.....  | 24.1                       | 27.0 | 29.5 | 23.0 | 25.0 | 17.0 | 65                             | 42   | 46   | 50   | 46   | 83   | 110   | 78   | 115   | 52   | 28   | 21.97                      | 4.03                                   |  |
| Nebraska.....      | 24.5                       | 26.5 | 16.5 | 25.7 | 29.0 | 24.7 | 62                             | 42   | 40   | 47   | 42   | 75   | 98    | 85   | 100   | 50   | 28   | 20.24                      | 6.62                                   |  |
| Kansas.....        | 18.1                       | 8.0  | 10.0 | 27.0 | 25.0 | 42.0 | 64                             | 40   | 55   | 47   | 42   | 77   | 115   | 95   | 100   | 45   | 29   | 13.80                      | 5.80                                   |  |
| Kentucky.....      | 26.0                       | 28.0 | 28.0 | 25.0 | 23.0 | 24.0 | 98                             | 75   | 78   | 77   | 77   | 90   | 115   | 140  | 157   | 115  | 61   | 33.25                      | 14.64                                  |  |
| Tennessee.....     | 20.4                       | 15.0 | 23.0 | 20.0 | 23.0 | 21.0 | 109                            | 80   | 70   | 82   | 75   | 100  | 144   | 152  | 180   | 110  | 100  | 28.31                      | 21.00                                  |  |
| Texas.....         | 28.8                       | 28.0 | 28.0 | 23.5 | 23.0 | 24.0 | 88                             | 78   | 81   | 70   | 68   | 80   | 137   | 130  | 112   | 75   | 45   | 23.91                      | 10.80                                  |  |
| Oklahoma.....      | 22.2                       | 18.0 | 17.0 | 30.0 | 24.0 | 22.0 | 84                             | 50   | 80   | 53   | 50   | 100  | 148   | 124  | 122   | 72   | 45   | 22.82                      | 9.90                                   |  |
| Montana.....       | 16.1                       | 15.0 | 22.0 | 5.6  | 18.0 | 20.0 | 75                             | 53   | 48   | 53   | 48   | 78   | 168   | 100  | 140   | 65   | 85   | 15.65                      | 12.00                                  |  |
| Wyoming.....       | 30.6                       | 36.0 | 37.0 | 15.0 | 36.0 | 29.0 | 94                             | 62   | 61   | 64   | 55   | 87   | 130   | 130  | 175   | 110  | 65   | 37.89                      | 18.85                                  |  |
| Colorado.....      | 28.3                       | 33.0 | 18.0 | 19.0 | 24.5 | 22.0 | 74                             | 50   | 56   | 55   | 48   | 82   | 104   | 113  | 120   | 75   | 37   | 24.42                      | 8.14                                   |  |
| New Mexico.....    | 25.6                       | 28.0 | 28.0 | 23.0 | 23.0 | 23.9 | 88                             | 71   | 72   | 75   | 70   | 100  | 138   | 110  | 110   | 75   | 61   | 28.32                      | 14.58                                  |  |
| Arizona.....       | 34.0                       | 35.0 | 34.0 | 33.0 | 34.0 | 33.0 | 102                            | 87   | 73   | 60   | 56   | 108  | 150   | 130  | 140   | 140  | 80   | 46.22                      | 25.60                                  |  |
| Utah.....          | 31.6                       | 37.0 | 35.0 | 22.0 | 31.1 | 23.2 | 84                             | 59   | 55   | 50   | 52   | 76   | 120   | 140  | 141   | 100  | 48   | 38.85                      | 18.26                                  |  |
| Nevada.....        | 31.3                       | 35.0 | 34.0 | 26.5 | 30.0 | 31.1 | 108                            | 87   | 90   | 65   | 70   | 95   | 119   | 154  | 150   | 165  | 80   | 44.44                      | 24.88                                  |  |
| Idaho.....         | 30.0                       | 23.0 | 28.0 | 26.0 | 25.0 | 33.0 | 78                             | 51   | 48   | 50   | 52   | 82   | 105   | 130  | 140   | 75   | 47   | 32.30                      | 15.04                                  |  |
| Washington.....    | 29.3                       | 29.0 | 15.0 | 23.0 | 33.5 | 33.6 | 81                             | 53   | 52   | 52   | 56   | 84   | 115   | 115  | 135   | 109  | 52   | 38.21                      | 19.14                                  |  |
| Oregon.....        | 28.3                       | 29.0 | 25.0 | 23.0 | 13.2 | 23.2 | 86                             | 55   | 55   | 61   | 62   | 80   | 115   | 138  | 150   | 100  | 50   | 33.00                      | 16.00                                  |  |
| California.....    | 26.0                       | 29.0 | 26.0 | 27.0 | 23.0 | 26.0 | 89                             | 70   | 68   | 59   | 62   | 95   | 120   | 115  | 141   | 100  | 56   | 30.47                      | 14.00                                  |  |
| United States..... | 23.6                       | 23.7 | 26.3 | 22.2 | 24.9 | 20.9 | 73.8                           | 50.5 | 53.7 | 54.3 | 51.6 | 88.1 | 113.7 | 91.7 | 120.6 | 71.3 | 42.2 | 23.21                      | 8.81                                   |  |

<sup>1</sup> Based upon farm price Dec. 1.

BARLEY—Continued.

TABLE 69.—Barley: Farm price, cents per bushel on first of each month, 1908–1921.

| Year.              | January. | February. | March. | April. | May.  | June. | July. | August. | September. | October. | November. | December. | Average. |
|--------------------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|----------|
| 1908.....          | 70.4     | 68.0      | 66.8   | 66.5   | 65.4  | 61.3  | 58.1  | 57.1    | 56.1       | 55.3     | 53.7      | 55.4      | 59.2     |
| 1909.....          | 56.5     | 58.3      | 59.4   | 61.2   | 63.8  | 67.0  | 67.0  | 61.2    | 54.6       | 53.4     | 53.3      | 54.0      | 56.5     |
| 1910.....          | 57.6     | 59.3      | 60.2   | 59.7   | 56.5  | 55.7  | 53.9  | 54.7    | 57.2       | 56.1     | 55.3      | 57.8      | 56.9     |
| 1911.....          | 59.8     | 64.1      | 63.0   | 69.1   | 74.0  | 73.8  | 70.1  | 69.3    | 77.0       | 81.7     | 84.9      | 86.9      | 78.2     |
| 1912.....          | 86.4     | 91.2      | 91.0   | 92.3   | 96.2  | 91.1  | 81.9  | 66.8    | 53.5       | 54.8     | 53.8      | 50.5      | 66.9     |
| 1913.....          | 49.9     | 51.4      | 40.0   | 48.5   | 48.2  | 52.7  | 53.7  | 50.8    | 55.2       | 56.8     | 54.7      | 53.7      | 53.3     |
| 1914.....          | 52.2     | 52.4      | 51.1   | 51.7   | 49.3  | 49.1  | 47.5  | 45.1    | 52.5       | 51.8     | 51.7      | 54.3      | 51.5     |
| 1915.....          | 54.3     | 62.9      | 67.7   | 64.7   | 63.3  | 62.0  | 55.8  | 50.7    | 51.9       | 46.8     | 50.1      | 51.6      | 54.1     |
| 1916.....          | 54.9     | 61.7      | 59.6   | 57.2   | 59.6  | 59.6  | 59.3  | 59.3    | 72.9       | 76.5     | 83.2      | 89.1      | 71.0     |
| 1917.....          | 87.1     | 92.7      | 96.0   | 102.3  | 120.1 | 119.3 | 106.6 | 114.5   | 110.0      | 113.9    | 111.3     | 112.7     | 107.7    |
| 1918.....          | 126.5    | 131.9     | 161.1  | 170.2  | 158.5 | 135.4 | 118.4 | 110.0   | 100.9      | 95.5     | 94.9      | 91.7      | 112.6    |
| 1919.....          | 91.3     | 86.8      | 85.4   | 92.7   | 103.9 | 109.2 | 108.4 | 118.7   | 115.6      | 115.3    | 117.1     | 120.0     | 108.8    |
| 1920.....          | 130.2    | 137.1     | 129.3  | 140.0  | 146.4 | 148.3 | 142.0 | 121.0   | 105.0      | 91.2     | 81.7      | 71.3      | 106.9    |
| 1921.....          | 64.4     | 57.2      | 56.8   | 54.4   | 49.2  | 51.0  | 50.6  | 49.4    | 47.0       | 45.4     | 41.7      | 42.2      | 48.9     |
| Average 1912–1921. | 79.7     | 82.5      | 84.8   | 87.4   | 80.5  | 87.8  | 82.4  | 79.2    | 76.4       | 74.8     | 74.0      | 73.8      | 78.2     |

TABLE 70.—Barley: Extent and causes of yearly crop losses, 1909–1920.

| Year.        | Deficient moisture. | Excessive moisture. | Floods.          | Frost or freeze. | Hail.  | Hot winds. | Storms. | Total climatic. | Plant disease. | Insect pests. | Animal pests. | Defective seed.  | Total. |
|--------------|---------------------|---------------------|------------------|------------------|--------|------------|---------|-----------------|----------------|---------------|---------------|------------------|--------|
|              | P. ct.              | P. ct.              | P. ct.           | P. ct.           | P. ct. | P. ct.     | P. ct.  | P. ct.          | P. ct.         | P. ct.        | P. ct.        | P. ct.           | P. ct. |
| 1920.....    | 10.4                | 2.2                 | 0.2              | 0.4              | 1.1    | 2.0        | 0.2     | 16.8            | 3.0            | 1.3           | 0.2           | 0.1              | 21.7   |
| 1919.....    | 18.0                | 3.4                 | .5               | .2               | 1.3    | 2.3        | .2      | 28.2            | 5.3            | 4.3           | .1            | .1               | 38.5   |
| 1918.....    | 20.7                | .4                  | .1               | .7               | 1.1    | 2.3        | .3      | 25.9            | .6             | 1.6           | .2            | ( <sup>1</sup> ) | 28.8   |
| 1917.....    | 26.6                | .8                  | ( <sup>1</sup> ) | 1.0              | 1.1    | 2.3        | .3      | 32.1            | .5             | .4            | .1            | .1               | 38.6   |
| 1916.....    | 8.0                 | 3.4                 | .3               | .7               | 1.5    | 5.0        | .5      | 20.2            | 8.5            | .7            | .1            | .1               | 30.6   |
| 1915.....    | 1.3                 | 3.2                 | .3               | .7               | 1.7    | .3         | .5      | 8.0             | .9             | .2            | .2            | .1               | 10.0   |
| 1914.....    | 8.2                 | 2.3                 | .2               | .6               | 1.5    | 4.6        | .4      | 18.4            | 2.3            | .6            | .2            | .1               | 22.7   |
| 1913.....    | 24.5                | .7                  | .1               | .4               | 1.0    | 3.2        | .3      | 31.1            | .2             | 1.2           | .2            | .2               | 34.3   |
| 1912.....    | 8.4                 | 1.8                 | .1               | .9               | 1.9    | 1.7        | .5      | 15.9            | .9             | .5            | .5            | .3               | 19.6   |
| 1911.....    | 30.0                | 1.2                 | .....            | .8               | .4     | 5.7        | .1      | 38.1            | .9             | .9            | .3            | .2               | 41.3   |
| 1910.....    | 34.0                | .2                  | .1               | .9               | .9     | 4.3        | .1      | 40.7            | .4             | .8            | .5            | .1               | 43.1   |
| 1909.....    | 8.9                 | 3.6                 | .3               | 1.0              | 2.1    | 2.3        | .8      | 19.0            | 1.4            | .4            | .5            | .2               | 22.8   |
| Average..... | 16.6                | 1.0                 | .2               | .7               | 1.3    | 3.1        | .4      | 24.5            | 2.1            | 1.1           | .3            | .1               | 28.9   |

<sup>1</sup> Less than 0.05 per cent.

## BARLEY—Continued.

TABLE 71.—*Barley: Monthly and yearly average price per bushel of No. 2, Minneapolis, 1910-11 to 1921-22.<sup>1</sup>*

| Crop year.           | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | July.  | Average. |
|----------------------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|--------|----------|
| 1910-11.....         | \$0.61  | \$0.63     | \$0.63   | \$0.66    | \$0.70    | \$0.77   | \$0.74    | \$0.81 | \$0.88 | \$0.75 | \$0.77 | \$0.87 | \$0.74   |
| 1911-12.....         | .85     | .94        | .95      | .98       | .91       | 1.05     | 1.00      | .95    | 1.01   | .99    | .76    | .60    | .92      |
| 1912-13.....         | .46     | .49        | .50      | .47       | .45       | .49      | .48       | .46    | .46    | .50    | .52    | .48    | .48      |
| 1913-14.....         | .58     | .61        | .66      | .53       | .50       | .52      | .50       | .48    | .47    | .48    | .47    | .45    | .51      |
| 1914-15.....         | .59     | .58        | .55      | .59       | .57       | .68      | .75       | .70    | .70    | .70    | .66    | .68    | .65      |
| 1915-16.....         | .59     | .48        | .51      | .56       | .61       | .70      | .66       | .65    | .68    | .70    | .68    | .69    | .63      |
| 1916-17.....         | .81     | .81        | 1.03     | 1.11      | 1.07      | 1.17     | 1.17      | 1.21   | 1.36   | 1.43   | 1.38   | 1.49   | 1.17     |
| 1917-18.....         | 1.31    | 1.33       | 1.28     | 1.27      | 1.49      | 1.56     | 1.88      | 2.12   | 1.82   | 1.46   | 1.23   | 1.18   | 1.40     |
| 1918-19.....         | 1.02    | .95        | .91      | .94       | .92       | .90      | .87       | .93    | 1.09   | 1.13   | 1.12   | 1.21   | 1.00     |
| 1919-20.....         | 1.33    | 1.27       | 1.29     | 1.33      | 1.52      | 1.52     | 1.37      | 1.51   | 1.60   | 1.74   | 1.49   | 1.16   | 1.43     |
| 1920-21.....         | 1.02    | .99        | .92      | .82       | .74       | .69      | .65       | .67    | .61    | .59    | .57    | .62    | .74      |
| 1921-22.....         | .58     | .65        | .50      | .54       | .47       |          |           |        |        |        |        |        |          |
| 11 year average..... | .78     | .82        | .83      | .84       | .86       | .91      | .92       | .95    | .97    | .96    | .88    | .86    | .89      |

<sup>1</sup> Compiled from Minneapolis Market Record.TABLE 72.—*Barley and malt: International trade, calendar years, 1911-1920.*

| Country.                            | Average 1911-1913. |                   | 1918              |                   | 1919              |                   | 1920              |                   |
|-------------------------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                     | Imports.           | Exports.          | Imports.          | Exports.          | Imports.          | Exports.          | Imports.          | Exports.          |
| PRINCIPAL EXPORT-<br>ING COUNTRIES. | 1,000<br>bushels.  | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. |
| Algeria.....                        | 298                | 4,720             | 1                 | 3,743             | 32                | 15,695            | 4,055             | 1,715             |
| Argentina.....                      | 1,310              | 917               | 835               | 213               | 1,123             | 1,871             |                   |                   |
| Austria-Hungary.....                | 839                | 18,271            |                   |                   |                   |                   | 1,647             |                   |
| British India.....                  |                    | 17,129            |                   | 14,848            |                   | 598               |                   | 251               |
| Bulgaria.....                       | 26                 | 1,700             |                   |                   |                   |                   |                   |                   |
| Canada.....                         | 166                | 6,670             | 8                 | 4,556             | 75                | 13,172            | 204               | 9,954             |
| Chile.....                          | 155                | 631               | ( <sup>1</sup> )  | 1,450             | ( <sup>1</sup> )  | 2,792             | 3                 | 2,024             |
| China.....                          | 61                 | 660               | 23                | 97                | 42                | 684               | 57                | 288               |
| Rumania.....                        | 109                | 16,692            |                   |                   | 20                |                   |                   | 19,253            |
| Russia.....                         | 974                | 168,461           |                   |                   |                   |                   |                   |                   |
| United States.....                  |                    | 8,400             |                   | 19,620            |                   | 46,745            |                   | 21,718            |
| PRINCIPAL IMPORT-<br>ING COUNTRIES. |                    |                   |                   |                   |                   |                   |                   |                   |
| Belgium.....                        | 20,236             | 3,853             |                   |                   | 2,581             | 320               | 2,527             | 139               |
| Brazil.....                         | 978                |                   | 309               | 1                 | 622               | ( <sup>2</sup> )  | 775               |                   |
| British South Africa.....           | 351                | 2                 | 34                | 20                | 73                | 87                | 346               | 3                 |
| Cuba.....                           | 278                |                   | 273               |                   | 443               |                   |                   |                   |
| Denmark.....                        | 2,098              | 3,561             | 12                | 437               | 2,699             | 177               | 46                | 926               |
| Egypt.....                          | 889                | 38                | 1                 | ( <sup>1</sup> )  | 107               |                   | 710               | ( <sup>1</sup> )  |
| France.....                         | 7,155              | 639               | 11,023            | 96                | 15,247            | 354               | 3,362             | 4,240             |
| Finland.....                        | 526                | 1                 | 61                |                   | 627               |                   | 71                |                   |
| Germany.....                        | 153,544            | 1,225             |                   |                   |                   |                   | 4,904             | 57                |
| Italy.....                          | 815                | 27                | 7,604             | 80                | 1,306             | 112               | 1,608             | 23                |
| Netherlands.....                    | 41,184             | 29,611            | 136               | ( <sup>1</sup> )  | 7,125             | 44                | 3,072             | 1,219             |
| Norway.....                         | 4,333              | ( <sup>1</sup> )  | 557               |                   | 782               |                   | 1,221             |                   |
| Switzerland.....                    | 4,440              | 1                 | 618               | 2                 | 1,370             | ( <sup>1</sup> )  | 1,386             | 1                 |
| United Kingdom.....                 | 51,727             | 932               | 11,725            | 65                | 38,908            | 220               | 29,796            | 364               |
| Other countries.....                | 1,604              | 15,500            | 859               | 3,421             | 1,529             | 8,754             | 1,064             | 3,875             |
| Total.....                          | 294,096            | 299,641           | 34,127            | 48,654            | 74,709            | 91,626            | 55,864            | 66,050            |

<sup>1</sup> Austria only, new boundaries.<sup>2</sup> Less than 500.

RYE.

TABLE 73.—Rye: Area and production in undermentioned countries, 1909–1921.

| Country.                        | Area.                              |                         |                         |                         | Production.                        |                           |                           |                           |
|---------------------------------|------------------------------------|-------------------------|-------------------------|-------------------------|------------------------------------|---------------------------|---------------------------|---------------------------|
|                                 | Average<br>1909–1913. <sup>1</sup> | 1919                    | 1920                    | 1921                    | Average<br>1909–1913. <sup>1</sup> | 1919                      | 1920                      | 1921                      |
| <b>NORTH AMERICA.</b>           | <i>1,000<br/>acres.</i>            | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>bushels.</i>          | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| United States.....              | 2,286                              | 6,307                   | 4,409                   | 4,228                   | 34,916                             | 75,483                    | 60,490                    | 57,918                    |
| Canada:                         |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Quebec.....                     | 14                                 | 33                      | 28                      | 25                      | 234                                | 578                       | 534                       | 430                       |
| Ontario.....                    | 77                                 | 140                     | 133                     | 123                     | 1,405                              | 2,219                     | 2,350                     | 1,776                     |
| Manitoba.....                   | 5                                  | 299                     | 149                     | 258                     | 96                                 | 4,089                     | 2,319                     | 3,565                     |
| Saskatchewan.....               | 3                                  | 190                     | 172                     | 1,208                   | 55                                 | 2,000                     | 2,535                     | 13,546                    |
| Alberta.....                    | 12                                 | 84                      | 161                     | 222                     | 297                                | 1,173                     | 3,420                     | 1,999                     |
| Other.....                      | 1                                  | 7                       | 7                       | 6                       | 9                                  | 148                       | 148                       | 139                       |
| Total Canada..                  | 112                                | 753                     | 650                     | 1,842                   | 2,096                              | 10,207                    | 11,306                    | 21,455                    |
| Mexico.....                     |                                    |                         |                         |                         | 70                                 |                           |                           |                           |
| Total North<br>America.....     | 2,348                              |                         |                         |                         | 37,082                             |                           |                           |                           |
| <b>SOUTH AMERICA.</b>           |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Argentina.....                  | 68                                 |                         |                         |                         | 949                                |                           |                           |                           |
| Chile.....                      | 6                                  | 8                       |                         | 3                       | 144                                | 192                       | 192                       | 55                        |
| Uruguay.....                    | ( <sup>2</sup> )                   | ( <sup>2</sup> )        | ( <sup>2</sup> )        | ( <sup>2</sup> )        | 1                                  | 1                         | ( <sup>2</sup> )          | 4                         |
| Total South<br>America.....     | 74                                 |                         |                         |                         | 1,094                              |                           |                           |                           |
| <b>EUROPE.</b>                  |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Austria.....                    | 5,019                              | 717                     | 711                     | 758                     | 112,752                            | 9,035                     | 10,046                    | 12,661                    |
| Croatia-Slavonia <sup>3</sup>   | 185                                |                         |                         |                         | 2,231                              |                           |                           |                           |
| Bosnia-Herzegovina <sup>3</sup> | 39                                 |                         |                         |                         | 444                                |                           |                           |                           |
| Belgium.....                    | 644                                | 523                     | 523                     | 523                     | 22,675                             | 14,505                    | 18,168                    | 17,761                    |
| Bulgaria.....                   | 530                                | 446                     | 452                     | 480                     | 8,553                              | 6,490                     | 9,798                     | 8,390                     |
| Czechoslovakia.....             |                                    | 1,824                   | 2,199                   | 2,183                   |                                    | 32,734                    | 32,941                    | 54,382                    |
| Denmark.....                    | 632                                | 583                     | 560                     | 559                     | 18,098                             | 14,009                    | 13,242                    | 12,204                    |
| Finland.....                    | 592                                | 602                     | 603                     | 605                     | 11,174                             | 10,505                    | 9,173                     | 10,385                    |
| France.....                     | 2,960                              | 2,010                   | 2,148                   | 2,160                   | 48,647                             | 30,577                    | 34,098                    | 44,494                    |
| Germany.....                    | 15,387                             | 10,880                  | 10,688                  | 10,617                  | 448,222                            | 240,122                   | 195,729                   | 260,144                   |
| Greece.....                     | 13                                 | 58                      | 131                     | 222                     | 218                                | 1,081                     | 1,360                     | 1,151                     |
| Hungary.....                    | 2,001                              |                         | 1,475                   | 1,370                   | 48,716                             |                           | 20,564                    | 22,095                    |
| Italy.....                      | 303                                | 273                     | 282                     | 287                     | 5,328                              | 4,571                     | 4,539                     | 5,634                     |
| Yugoslavia.....                 |                                    | 682                     | 916                     |                         |                                    | 9,816                     | 18,121                    |                           |
| Luxemburg.....                  | 26                                 | 20                      | 20                      | 20                      | 651                                | 367                       | 340                       | 488                       |
| Netherlands.....                | 557                                | 497                     | 492                     | 492                     | 16,422                             | 14,280                    | 14,245                    | 16,646                    |
| Norway.....                     | 37                                 | 37                      | 36                      | 36                      | 974                                | 983                       | 970                       | 1,115                     |
| Romania.....                    | 317                                | 748                     | 771                     | 777                     | 4,652                              | 10,046                    | 11,168                    | 8,858                     |
| Russia proper <sup>4</sup>      | 64,575                             |                         |                         |                         | 791,333                            |                           |                           |                           |
| Poland.....                     | 5,261                              | 6,544                   | 7,236                   | 8,837                   | 90,494                             | 103,045                   | 74,842                    | 167,215                   |
| Portugal.....                   |                                    |                         |                         |                         |                                    | 1,809                     | 2,959                     |                           |
| Northern Caucasus <sup>5</sup>  | 547                                |                         |                         |                         | 7,409                              |                           |                           |                           |
| Serbia <sup>6</sup>             | 114                                |                         |                         |                         | 1,533                              |                           |                           |                           |
| Spain.....                      | 1,987                              | 1,809                   | 1,799                   | 1,738                   | 27,685                             | 23,296                    | 27,830                    | 28,118                    |
| Sweden.....                     | 977                                | 919                     | 914                     | 913                     | 23,859                             | 23,074                    | 23,070                    | 23,502                    |
| Switzerland.....                | 60                                 | 54                      | 52                      | 49                      | 1,783                              | 1,575                     | 1,632                     | 1,589                     |
| United Kingdom.....             | 61                                 | 122                     | 108                     | 91                      | 1,751                              |                           |                           |                           |
| Total Europe..                  | 103,424                            |                         |                         |                         | 1,602,554                          |                           |                           |                           |
| <b>ASIA.</b>                    |                                    |                         |                         |                         |                                    |                           |                           |                           |
| Russia (Asiatic) <sup>7</sup>   | 2,451                              |                         |                         |                         | 24,663                             |                           |                           |                           |

<sup>1</sup> Five-year average except in a few cases where statistics were unavailable.

<sup>2</sup> Less than 500.

<sup>3</sup> Old boundaries.

<sup>4</sup> Bohemia, Moravia, and Silesia

<sup>5</sup> 1910 census.

<sup>6</sup> 1914.

<sup>7</sup> Includes maslin.

<sup>8</sup> Former Kingdom, Bessarabia and Bukovina.

<sup>9</sup> Former Russian Poland, Western Galicia and Posen.

## RYE—Continued.

TABLE 73.—*Rye: Area and production in undermentioned countries, 1909-1921—Contd*

| Country.                    | Area.                 |                  |                  |       | Production.           |                  |       |       |
|-----------------------------|-----------------------|------------------|------------------|-------|-----------------------|------------------|-------|-------|
|                             | Average<br>1909-1913. | 1919             | 1920             | 1921  | Average<br>1909-1913. | 1919             | 1920  | 1921  |
| <b>AUSTRALASIA.</b>         |                       |                  |                  |       |                       |                  |       |       |
| <b>Australia:</b>           |                       |                  |                  |       |                       |                  |       |       |
| Queensland.....             | ( <sup>2</sup> )      | ( <sup>2</sup> ) | .....            | ..... | 2                     | ( <sup>2</sup> ) | ..... | ..... |
| New South Wales.....        | 4                     | 1                | 1                | ..... | 49                    | 12               | 11    | ..... |
| Victoria.....               | 2                     | 1                | 1                | ..... | 24                    | 7                | 9     | ..... |
| South Australia.....        | 1                     | 1                | 1                | ..... | 10                    | 6                | 5     | ..... |
| Western Australia.....      | 1                     | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ..... | 5                     | 2                | 2     | ..... |
| Tasmania.....               | 1                     | 1                | 1                | ..... | 18                    | 6                | 5     | ..... |
| Total Australia.....        | 9                     | 4                | 4                | ..... | 108                   | 33               | 32    | ..... |
| New Zealand.....            | 5                     | ( <sup>2</sup> ) | .....            | ..... | 97                    | .....            | ..... | ..... |
| Total Austral-<br>asia..... | 14                    | .....            | .....            | ..... | 205                   | .....            | ..... | ..... |
| Grand total....             | 108,311               | .....            | .....            | ..... | 1,755,598             | .....            | ..... | ..... |

<sup>2</sup> Less than 500.TABLE 74.—*Rye: World production so far as reported, 1895-1921.*

| Year.     | Production.     | Year.     | Production.     | Year.     | Production.     | Year.     | Production.     |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |
| 1895..... | 1,488,212,000   | 1902..... | 1,647,845,000   | 1909..... | 1,747,123,000   | 1916..... | 1,432,786,000   |
| 1896..... | 1,499,250,000   | 1903..... | 1,659,961,000   | 1910..... | 1,673,473,000   | 1917..... | 473,152,000     |
| 1897..... | 1,390,645,000   | 1904..... | 1,742,112,000   | 1911..... | 1,753,938,000   | 1918..... | 561,165,000     |
| 1898..... | 1,461,171,000   | 1905..... | 1,495,751,000   | 1912..... | 1,833,517,000   | 1919..... | 638,745,000     |
| 1899..... | 1,533,179,000   | 1906..... | 1,433,395,000   | 1913..... | 1,880,387,000   | 1920..... | 556,845,000     |
| 1900..... | 1,557,634,000   | 1907..... | 1,538,778,000   | 1914..... | 1,596,882,000   | 1921..... | 733,234,000     |
| 1901..... | 1,416,622,000   | 1908..... | 1,590,057,000   | 1915..... | 1,583,206,000   |           |                 |

TABLE 75.—*Rye: Average yield per acre in undermentioned countries, 1890-1921.*

| Year.          | United<br>States. | Russia<br>(Euro-<br>pean). | Germany.        | Austria.        | Hungary<br>proper. | France. <sup>1</sup> | Ireland. <sup>1</sup> |
|----------------|-------------------|----------------------------|-----------------|-----------------|--------------------|----------------------|-----------------------|
|                | <i>Bushels.</i>   | <i>Bushels.</i>            | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>    | <i>Bushels.</i>      | <i>Bushels.</i>       |
| Average:       |                   |                            |                 |                 |                    |                      |                       |
| 1890-1899..... | 13.9              | 10.4                       | 20.9            | 16.1            | .....              | 17.6                 | 25.2                  |
| 1900-1909..... | 15.7              | 11.5                       | 25.6            | 19.0            | 17.6               | 17.1                 | 27.5                  |
| 1910-1919..... | 12.7              | 11.8                       | 25.2            | 18.0            | 18.4               | 15.6                 | 29.3                  |
| 1919.....      | 12.0              | .....                      | 22.1            | 12.6            | .....              | 15.2                 | .....                 |
| 1920.....      | 13.7              | .....                      | 18.3            | 14.1            | 14.0               | 15.9                 | .....                 |
| 1921.....      | 13.7              | .....                      | 24.5            | 16.7            | 16.1               | 20.6                 | .....                 |

<sup>1</sup> Winchester bushels.<sup>2</sup> Seven-year average.<sup>3</sup> Six-year average.<sup>4</sup> Nine-year average.

# Statistics of Rye.

561

## RYE—Continued.

TABLE 76.—*Rye: Acreage, production, value, exports, etc., in the United States, 1849-1921.*

[See headnote of Table 4.]

| Year.        | Acreage harvested (000 omitted). | Average yield per acre. | Production (000 omitted). | Average farm price per bushel Dec. 1. | Farm value Dec. 1 (000 omitted). | Chicago cash price per bushel, No. 2. |       |                |       | Domestic exports, including rye flour, fiscal year beginning July 1. |
|--------------|----------------------------------|-------------------------|---------------------------|---------------------------------------|----------------------------------|---------------------------------------|-------|----------------|-------|--|
|              |                                  |                         |                           |                                       |                                  | December.                             |       | Following May. |       |  |
|              |                                  |                         |                           |                                       |                                  | Low.                                  | High. | Low.           | High. |  |
|              | Acres.                           | Bush.                   | Bushels.                  | Cents.                                | Dollars.                         | Cts.                                  | Cts.  | Cts.           | Cts.  | Bushels.   |
| 1849.....    |                                  |                         | 14,189                    |                                       |                                  |                                       |       |                |       |  |
| 1850.....    |                                  |                         | 21,101                    |                                       |                                  |                                       |       |                |       |  |
| 1866-75..... | 1,347                            | 13.6                    | 18,267                    | 79.7                                  | 14,559                           | 80                                    | 90    | 97             | 107   | 540,342  |
| 1876-85..... | 1,892                            | 13.0                    | 24,625                    | 63.1                                  | 15,540                           | 64                                    | 68    | 68             | 75    | 2,890,991  |
| 1886-95..... | 2,188                            | 12.8                    | 27,975                    | 54.6                                  | 15,273                           | 52                                    | 56    | 55             | 60    | 1,827,551  |
| 1896.....    | 2,126                            | 13.6                    | 28,913                    | 38.8                                  | 11,231                           | 37                                    | 42½   | 32½            | 35½   | 8,575,663  |
| 1897.....    | 2,077                            | 16.1                    | 33,433                    | 43.2                                  | 14,454                           | 45½                                   | 47    | 48             | 75    | 15,563,035   |
| 1898.....    | 2,071                            | 15.9                    | 32,888                    | 44.5                                  | 14,040                           | 52½                                   | 55½   | 56½            | 62    | 10,169,822   |
| 1899.....    | 2,054                            | 14.8                    | 30,334                    | 49.6                                  | 15,046                           | 49                                    | 52    | 53             | 50½   | 2,382,012  |
| 1900.....    | 2,042                            | 15.1                    | 30,791                    | 49.8                                  | 15,341                           | 45½                                   | 49½   | 51½            | 54    | 2,345,512  |
| 1901.....    | 2,033                            | 15.3                    | 31,103                    | 55.4                                  | 17,220                           | 59                                    | 65½   | 54½            | 58    | 2,712,077  |
| 1902.....    | 2,051                            | 17.2                    | 35,255                    | 50.5                                  | 17,798                           | 48                                    | 49½   | 48             | 50½   | 5,445,273  |
| 1903.....    | 2,074                            | 15.4                    | 31,990                    | 54.0                                  | 17,272                           | 50½                                   | 52½   | 69½            | 78    | 784,068  |
| 1904.....    | 2,035                            | 15.3                    | 31,805                    | 68.9                                  | 21,023                           | 73                                    | 75    | 70             | 84    | 25,749   |
| 1905.....    | 2,141                            | 16.4                    | 35,167                    | 60.4                                  | 21,241                           | 64                                    | 68    | 58             | 62    | 1,357,826  |
| 1906.....    | 2,186                            | 16.7                    | 36,559                    | 58.5                                  | 21,381                           | 61                                    | 65    | 69             | 87½   | 769,717  |
| 1907.....    | 2,167                            | 16.4                    | 35,455                    | 72.5                                  | 25,709                           | 75                                    | 82    | 79             | 86    | 2,444,588  |
| 1908.....    | 2,175                            | 16.4                    | 35,768                    | 72.8                                  | 26,023                           | 75                                    | 77½   | 83             | 90    | 1,295,701  |
| 1909.....    | 2,196                            | 16.1                    | 35,406                    | 72.2                                  | 25,548                           | 72                                    | 80    | 74             | 80    | 242,262  |
| 1910.....    | 2,185                            | 16.0                    | 34,897                    | 71.5                                  | 24,953                           | 80                                    | 82    | 90             | 113   | 40,123   |
| 1911.....    | 2,127                            | 15.6                    | 33,119                    | 83.2                                  | 27,557                           | 91                                    | 94    | 90             | 95½   | 31,334   |
| 1912.....    | 2,117                            | 16.8                    | 35,694                    | 66.3                                  | 23,636                           | 58                                    | 64    | 60             | 64    | 1,854,738  |
| 1913.....    | 2,557                            | 10.2                    | 41,381                    | 63.4                                  | 26,220                           | 61                                    | 65    | 62             | 67    | 2,272,492  |
| 1914.....    | 2,541                            | 16.8                    | 42,779                    | 86.5                                  | 37,018                           | 107½                                  | 112½  | 115            | 122   | 13,026,778   |
| 1915.....    | 3,129                            | 17.3                    | 54,050                    | 83.4                                  | 45,083                           | 94½                                   | 98½   | 96½            | 99½   | 15,250,151   |
| 1916.....    | 3,213                            | 15.2                    | 48,832                    | 122.1                                 | 59,676                           | 130                                   | 151   | 200            | 240   | 13,709,499   |
| 1917.....    | 4,317                            | 14.6                    | 62,933                    | 166.0                                 | 107,447                          | 176                                   | 184   | 180            | 230   | 17,186,417   |
| 1918.....    | 6,391                            | 14.2                    | 91,041                    | 151.6                                 | 138,038                          | 154                                   | 164   | 145½           | 173   | 36,467,450   |
| 1919¹.....   | 6,307                            | 12.0                    | 75,488                    | 133.2                                 | 100,573                          | 149                                   | 182   | 198            | 229   | 41,530,961   |
| 1920.....    | 4,409                            | 13.7                    | 60,490                    | 126.8                                 | 76,693                           | 144                                   | 167   |                |       | 47,337,466   |
| 1921.....    | 4,228                            | 13.7                    | 57,918                    | 70.2                                  | 40,680                           | 84                                    | 89    |                |       |  |

¹ Acreage adjusted to census basis.

² Preliminary estimate.

## RYE—Continued.

TABLE 77.—Rye: Acreage, production, and total farm value, by States, 1920-1921.

| States.             | Thousands of acres. |                   | Production (thousands of bushels). |                   | Total value, basis Dec. 1 price (thousands of dollars). |                   |
|---------------------|---------------------|-------------------|------------------------------------|-------------------|---|-------------------|
|                     | 1920                | 1921 <sup>1</sup> | 1920                               | 1921 <sup>1</sup> | 1920  | 1921 <sup>1</sup> |
| Massachusetts.....  | 2                   | 2                 | 36                                 | 30                | 70  | 52                |
| Connecticut.....    | 5                   | 5                 | 90                                 | 95                | 157   | 142               |
| New York.....       | 71                  | 52                | 1,242                              | 806               | 1,962   | 708               |
| New Jersey.....     | 55                  | 57                | 962                                | 998               | 1,635   | 1,015             |
| Pennsylvania.....   | 186                 | 188               | 2,976                              | 3,008             | 4,166   | 2,568             |
| Delaware.....       | 5                   | 4                 | 75                                 | 44                | 102   | 44                |
| Maryland.....       | 17                  | 17                | 262                                | 238               | 409   | 219               |
| Virginia.....       | 40                  | 38                | 480                                | 418               | 744   | 397               |
| West Virginia.....  | 11                  | 10                | 121                                | 120               | 194   | 114               |
| North Carolina..... | 43                  | 39                | 408                                | 273               | 775   | 341               |
| South Carolina..... | 5                   | 5                 | 55                                 | 50                | 165   | 125               |
| Georgia.....        | 11                  | 12                | 110                                | 108               | 231   | 189               |
| Ohio.....           | 90                  | 83                | 1,296                              | 1,079             | 1,750   | 906               |
| Indiana.....        | 278                 | 306               | 3,892                              | 3,973             | 5,060   | 2,904             |
| Illinois.....       | 188                 | 197               | 2,983                              | 3,349             | 3,813   | 2,679             |
| Michigan.....       | 670                 | 642               | 9,849                              | 8,346             | 12,804  | 5,842             |
| Wisconsin.....      | 385                 | 328               | 6,160                              | 4,756             | 8,008   | 3,377             |
| Minnesota.....      | 518                 | 582               | 8,806                              | 10,185            | 10,743  | 6,315             |
| Iowa.....           | 32                  | 32                | 544                                | 515               | 636   | 376               |
| Missouri.....       | 28                  | 25                | 338                                | 280               | 420   | 211               |
| North Dakota.....   | 974                 | 846               | 9,740                              | 9,806             | 11,591  | 5,397             |
| South Dakota.....   | 205                 | 191               | 2,768                              | 3,056             | 3,017   | 1,772             |
| Nebraska.....       | 129                 | 135               | 1,819                              | 1,714             | 1,874   | 1,028             |
| Kansas.....         | 112                 | 91                | 1,456                              | 1,138             | 1,456   | 774               |
| Kentucky.....       | 18                  | 18                | 216                                | 180               | 324   | 202               |
| Tennessee.....      | 19                  | 19                | 171                                | 152               | 325   | 205               |
| Alabama.....        | 1                   | 1                 | 11                                 | 12                | 28  | 19                |
| Texas.....          | 13                  | 13                | 208                                | 156               | 312   | 156               |
| Oklahoma.....       | 37                  | 34                | 555                                | 408               | 555   | 269               |
| Arkansas.....       | 1                   | 1                 | 10                                 | 9                 | 22  | 12                |
| Montana.....        | 59                  | 59                | 472                                | 590               | 510   | 313               |
| Wyoming.....        | 22                  | 21                | 396                                | 315               | 455   | 153               |
| Colorado.....       | 100                 | 92                | 1,180                              | 1,058             | 1,298   | 635               |
| Utah.....           | 16                  | 15                | 133                                | 140               | 200   | 98                |
| Idaho.....          | 8                   | 8                 | 112                                | 160               | 112   | 112               |
| Washington.....     | 20                  | 21                | 190                                | 204               | 304   | 191               |
| Oregon.....         | 35                  | 39                | 420                                | 554               | 525   | 377               |
| United States.....  | 4,409               | 4,228             | 60,490                             | 57,018            | 76,693  | 40,680            |

<sup>1</sup> Preliminary estimate.

TABLE 78.—Rye: Condition of crop, United States, on first of months named, 1901-1921.

| Year.     | De-<br>cem-<br>ber of<br>pre-<br>vious<br>year. | April. | May.   | June.  | When<br>har-<br>vested. | Year.     | De-<br>cem-<br>ber of<br>pre-<br>vious<br>year. | April. | May.   | June.  | When<br>har-<br>vested. |
|-----------|---|--------|--------|--------|-------------------------|-----------|---|--------|--------|--------|-------------------------|
| 1901..... | P. ct.  | P. ct. | P. ct. | P. ct. | P. ct.                  | 1912..... | P. ct.  | P. ct. | P. ct. | P. ct. | P. ct.                  |
| 1902..... | 99.1  | 93.1   | 94.6   | 93.9   | 93.0                    | 1913..... | 93.3  | 87.9   | 87.5   | 97.7   | 88.2                    |
| 1903..... | 89.9  | 85.4   | 83.4   | 83.1   | 90.2                    | 1914..... | 93.5  | 89.3   | 91.0   | 90.9   | 88.6                    |
| 1904..... | 98.1  | 97.9   | 93.3   | 90.6   | 89.5                    | 1915..... | 95.3  | 91.3   | 93.4   | 93.6   | 92.9                    |
| 1905..... | 92.7  | 82.3   | 81.2   | 86.3   | 88.9                    | 1916..... | 93.6  | 89.5   | 93.3   | 92.0   | 92.0                    |
| 1906..... | 90.5  | 92.1   | 93.5   | 94.0   | 93.2                    | 1917..... | 91.5  | 87.8   | 88.7   | 86.9   | 87.0                    |
| 1907..... | 95.4  | 90.9   | 92.9   | 89.9   | 91.3                    | 1918..... | 88.8  | 86.0   | 88.8   | 84.3   | 79.4                    |
| 1908..... | 96.2  | 92.0   | 88.0   | 88.1   | 89.7                    | 1919..... | 84.1  | 95.8   | 85.8   | 83.6   | 80.8                    |
| 1909..... | 91.4  | 89.1   | 90.3   | 91.3   | 91.2                    | 1920..... | 89.0  | 80.6   | 95.3   | 93.5   | 85.7                    |
| 1910..... | 87.6  | 87.2   | 88.1   | 89.6   | 91.4                    | 1921..... | 89.8  | 86.8   | 85.1   | 84.4   | 83.5                    |
| 1911..... | 94.1  | 92.3   | 91.3   | 90.6   | 87.5                    | 1922..... | 90.3  | 90.3   | 92.5   | 90.3   | 86.9                    |
|           | 92.6  | 89.3   | 90.0   | 88.6   | 85.0                    |           | 92.2  | 89.0   | 91.7   |        |                         |

## RYE—Continued.

TABLE 79.—Rye: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | May.            | June.           | July.           | August<br>production<br>estimate. | Final<br>estimate. |
|--------------|-----------------|-----------------|-----------------|-----------------------------------|--------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>                   | <i>Bushels.</i>    |
| 1916.....    | 44,255          | 43,537          | 44,001          | 41,384                            | 43,802             |
| 1917.....    | 80,735          | 57,868          | 56,098          | 56,044                            | 62,833             |
| 1918.....    | 82,629          | 81,048          | 81,604          | 78,687                            | 91,041             |
| 1919.....    | 108,725         | 107,381         | 102,689         | 84,552                            | 75,483             |
| 1920.....    | 79,789          | 80,006          | 81,997          | 77,838                            | 60,490             |
| Average..... | 75,226          | 73,967          | 73,278          | 67,412                            | 67,762             |
| 1921.....    | 72,007          | 71,011          | 69,956          | 64,832                            | 57,918             |

<sup>1</sup> Preliminary.

TABLE 80.—Rye: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.      | Yield per acre (bushels).  |      |      |      |      |      | Farm price per bushel (cents). |      |      |      |      |       |       |       |       |       | Value per acre (dollars). <sup>1</sup> |                            |       |
|-------------|----------------------------|------|------|------|------|------|--------------------------------|------|------|------|------|-------|-------|-------|-------|-------|--|----------------------------|-------|
|             | 5-year average, 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921 | 10-year average, 1912-1921.    | 1912 | 1913 | 1914 | 1915 | 1916  | 1917  | 1918  | 1919  | 1920  | 1921                                   | 5-year average, 1916-1920. | 1921  |
|             |                            |      |      |      |      |      |                                |      |      |      |      |       |       |       |       |       |  |                            |       |
| Mass.....   | 19.0                       | 19.0 | 20.0 | 23.0 | 18.0 | 15.0 | 150                            | 100  | 98   | 101  | 102  | 127   | 200   | 227   | 175   | 195   | 175                                    | 36.45                      | 26.25 |
| Conn.....   | 18.9                       | 20.5 | 22.0 | 20.0 | 18.0 | 19.0 | 145                            | 92   | 92   | 98   | 103  | 125   | 210   | 205   | 200   | 174   | 150                                    | 36.79                      | 28.50 |
| N. Y.....   | 19.0                       | 19.0 | 16.5 | 16.0 | 17.5 | 15.5 | 122                            | 70   | 75   | 89   | 93   | 128   | 184   | 172   | 150   | 158   | 99                                     | 27.61                      | 15.34 |
| N. J.....   | 17.6                       | 18.5 | 18.5 | 18.0 | 17.5 | 17.5 | 123                            | 79   | 80   | 82   | 92   | 117   | 175   | 173   | 160   | 170   | 102                                    | 28.39                      | 17.85 |
| Pa.....     | 16.4                       | 17.0 | 17.0 | 16.0 | 16.0 | 16.0 | 115                            | 77   | 74   | 83   | 84   | 109   | 170   | 105   | 157   | 140   | 95                                     | 24.00                      | 15.20 |
| Del.....    | 13.9                       | 16.0 | 14.5 | 13.0 | 15.0 | 11.0 | 122                            | 81   | 79   | 92   | 99   | 123   | 178   | 171   | 160   | 136   | 100                                    | 22.59                      | 11.00 |
| Md.....     | 14.9                       | 16.0 | 15.0 | 14.0 | 15.4 | 14.0 | 119                            | 80   | 76   | 86   | 88   | 110   | 168   | 170   | 163   | 156   | 92                                     | 23.25                      | 12.88 |
| Va.....     | 12.3                       | 15.0 | 12.0 | 11.5 | 12.0 | 11.0 | 123                            | 85   | 81   | 90   | 93   | 107   | 175   | 173   | 170   | 155   | 95                                     | 19.76                      | 10.45 |
| W. Va.....  | 12.6                       | 13.5 | 13.7 | 13.0 | 11.0 | 12.0 | 124                            | 84   | 87   | 90   | 93   | 119   | 169   | 180   | 165   | 160   | 95                                     | 21.11                      | 11.40 |
| N. C.....   | 8.9                        | 10.0 | 9.0  | 8.9  | 9.5  | 7.0  | 147                            | 105  | 98   | 105  | 105  | 130   | 200   | 198   | 210   | 190   | 125                                    | 17.43                      | 8.75  |
| S. C.....   | 10.4                       | 10.0 | 11.2 | 10.0 | 11.0 | 10.0 | 221                            | 145  | 150  | 150  | 151  | 185   | 285   | 205   | 295   | 300   | 250                                    | 28.43                      | 25.00 |
| Ga.....     | 9.0                        | 8.3  | 8.8  | 8.9  | 10.0 | 9.0  | 186                            | 140  | 135  | 150  | 140  | 160   | 270   | 210   | 272   | 210   | 175                                    | 30.28                      | 15.75 |
| Ohio.....   | 15.7                       | 18.0 | 17.0 | 16.0 | 14.4 | 13.0 | 110                            | 75   | 69   | 81   | 83   | 120   | 161   | 150   | 145   | 135   | 84                                     | 22.90                      | 10.92 |
| Ind.....    | 14.5                       | 15.0 | 16.5 | 14.0 | 14.0 | 13.0 | 107                            | 68   | 62   | 85   | 82   | 119   | 180   | 162   | 140   | 130   | 73                                     | 20.71                      | 9.49  |
| Ill.....    | 17.1                       | 17.5 | 19.0 | 16.6 | 15.6 | 17.0 | 108                            | 70   | 65   | 85   | 83   | 122   | 165   | 150   | 130   | 130   | 80                                     | 23.60                      | 13.60 |
| Mich.....   | 13.9                       | 14.0 | 14.3 | 13.3 | 14.7 | 13.0 | 108                            | 65   | 62   | 91   | 85   | 130   | 165   | 150   | 128   | 130   | 70                                     | 19.85                      | 9.10  |
| Wis.....    | 16.5                       | 18.5 | 17.0 | 16.5 | 16.0 | 14.5 | 108                            | 61   | 57   | 91   | 87   | 132   | 169   | 150   | 133   | 130   | 71                                     | 24.17                      | 10.80 |
| Minn.....   | 17.6                       | 18.5 | 20.0 | 15.0 | 17.0 | 17.5 | 103                            | 50   | 48   | 89   | 81   | 127   | 167   | 150   | 130   | 122   | 62                                     | 24.04                      | 10.85 |
| Iowa.....   | 17.2                       | 18.0 | 19.0 | 15.9 | 17.0 | 16.1 | 102                            | 62   | 60   | 77   | 80   | 115   | 165   | 147   | 132   | 117   | 73                                     | 23.25                      | 11.75 |
| Mo.....     | 12.8                       | 14.7 | 14.0 | 12.6 | 12.0 | 11.2 | 114                            | 80   | 75   | 87   | 86   | 123   | 165   | 163   | 150   | 125   | 86                                     | 18.72                      | 9.63  |
| N. Dak..... | 9.8                        | 9.5  | 10.5 | 8.0  | 10.0 | 11.0 | 99                             | 47   | 45   | 84   | 79   | 125   | 164   | 145   | 121   | 119   | 58                                     | 13.80                      | 6.38  |
| S. Dak..... | 15.3                       | 16.0 | 18.0 | 13.0 | 13.5 | 16.0 | 96                             | 52   | 50   | 78   | 76   | 118   | 155   | 141   | 125   | 109   | 58                                     | 20.48                      | 9.28  |
| Nebr.....   | 14.3                       | 15.6 | 12.9 | 16.8 | 14.1 | 12.7 | 95                             | 56   | 60   | 74   | 73   | 116   | 155   | 135   | 115   | 103   | 60                                     | 18.68                      | 7.62  |
| Kans.....   | 13.0                       | 14.0 | 14.3 | 11.0 | 13.0 | 12.0 | 106                            | 68   | 75   | 80   | 76   | 110   | 167   | 170   | 141   | 100   | 68                                     | 18.48                      | 8.60  |
| Ky.....     | 12.0                       | 12.5 | 13.6 | 12.0 | 12.0 | 10.0 | 127                            | 88   | 87   | 96   | 94   | 129   | 175   | 161   | 175   | 180   | 112                                    | 19.45                      | 11.20 |
| Tenn.....   | 9.0                        | 9.8  | 10.0 | 8.0  | 9.0  | 8.0  | 144                            | 98   | 99   | 98   | 103  | 135   | 195   | 192   | 200   | 190   | 135                                    | 16.98                      | 10.80 |
| Ala.....    | 10.6                       | 9.5  | 11.0 | 9.0  | 10.0 | 10.0 | 189                            | 134  | 140  | 110  | 135  | 175   | 268   | 261   | 280   | 250   | 160                                    | 26.77                      | 17.20 |
| Tex.....    | 12.1                       | 10.0 | 6.4  | 17.0 | 16.0 | 12.0 | 188                            | 110  | 101  | 99   | 103  | 120   | 196   | 238   | 167   | 150   | 100                                    | 19.34                      | 12.00 |
| Okla.....   | 12.0                       | 10.0 | 11.0 | 14.0 | 15.0 | 12.0 | 114                            | 87   | 86   | 95   | 77   | 125   | 170   | 187   | 150   | 100   | 68                                     | 17.21                      | 7.92  |
| Ark.....    | 10.5                       | 13.5 | 10.5 | 9.5  | 10.0 | 9.0  | 143                            | 105  | 95   | 105  | 100  | 115   | 180   | 210   | 200   | 220   | 130                                    | 18.96                      | 11.70 |
| Mont.....   | 9.1                        | 12.7 | 12.0 | 8.0  | 8.0  | 10.0 | 100                            | 60   | 55   | 70   | 65   | 96    | 165   | 144   | 185   | 108   | 53                                     | 14.42                      | 5.80  |
| Wyo.....    | 14.8                       | 14.0 | 18.0 | 9.0  | 10.0 | 15.0 | 107                            | 65   | 64   | 81   | 90   | 108   | 155   | 162   | 180   | 115   | 58                                     | 20.54                      | 8.70  |
| Colo.....   | 11.0                       | 16.0 | 7.0  | 8.8  | 11.8 | 11.5 | 94                             | 55   | 60   | 65   | 70   | 105   | 146   | 140   | 130   | 105   | 60                                     | 14.34                      | 6.80  |
| Utah.....   | 9.1                        | 8.0  | 13.0 | 7.0  | 8.3  | 9.3  | 111                            | 69   | 60   | 60   | 65   | 100   | 160   | 180   | 200   | 150   | 70                                     | 14.98                      | 6.91  |
| Idaho.....  | 15.7                       | 15.5 | 15.0 | 14.0 | 14.0 | 20.0 | 99                             | 60   | 58   | 67   | 68   | 95    | 135   | 165   | 175   | 100   | 70                                     | 20.08                      | 14.00 |
| Wash.....   | 11.6                       | 12.7 | 10.0 | 12.0 | 9.5  | 14.0 | 118                            | 65   | 60   | 85   | 78   | 111   | 175   | 200   | 158   | 160   | 65                                     | 19.14                      | 8.10  |
| Oreg.....   | 11.7                       | 12.7 | 11.0 | 8.4  | 12.0 | 14.2 | 121                            | 70   | 75   | 100  | 90   | 115   | 170   | 205   | 190   | 125   | 68                                     | 18.93                      | 9.68  |
| U. S.....   | 13.6                       | 14.6 | 14.2 | 12.0 | 13.7 | 13.7 | 107.0                          | 66.3 | 63.4 | 86.5 | 83.4 | 122.1 | 168.0 | 151.0 | 133.2 | 126.8 | 70.2                                   | 10.54                      | 9.62  |

<sup>1</sup> Based upon farm price Dec. 1.



## RYE—Continued.

TABLE 81.—*Rye: Farm price, cents per bushel on first of each month, 1908-1921.*

| Year.               | January. | February. | March. | April. | May.  | June. | July. | August. | September. | October. | November. | December. | Average. |
|---------------------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|----------|
| 1908.....           | 73.3     | 74.0      | 74.5   | 75.3   | 74.7  | 76.3  | 75.4  | 74.2    | 72.8       | 74.1     | 73.7      | 73.6      | 73.9     |
| 1909.....           | 73.4     | 73.8      | 75.9   | 77.9   | 78.9  | 81.2  | 81.7  | 78.5    | 72.4       | 72.8     | 73.6      | 71.2      | 74.2     |
| 1910.....           | 74.8     | 76.1      | 76.5   | 76.6   | 74.9  | 74.8  | 74.6  | 74.4    | 74.1       | 72.8     | 71.6      | 71.5      | 73.7     |
| 1911.....           | 73.3     | 73.1      | 71.9   | 75.4   | 75.8  | 77.9  | 76.9  | 75.5    | 76.9       | 79.7     | 83.1      | 83.2      | 78.1     |
| 1912.....           | 82.7     | 84.4      | 84.0   | 85.1   | 84.6  | 86.1  | 83.6  | 77.9    | 70.8       | 70.1     | 68.8      | 66.3      | 74.9     |
| 1913.....           | 63.8     | 63.9      | 63.2   | 62.9   | 62.4  | 64.1  | 63.2  | 60.7    | 63.0       | 64.8     | 63.2      | 63.4      | 63.8     |
| 1914.....           | 62.5     | 61.7      | 61.9   | 63.0   | 62.9  | 64.4  | 63.1  | 61.0    | 75.4       | 79.0     | 80.1      | 86.5      | 72.8     |
| 1915.....           | 90.2     | 100.6     | 105.4  | 100.4  | 101.9 | 98.1  | 93.7  | 89.0    | 85.5       | 81.7     | 85.7      | 83.4      | 89.2     |
| 1916.....           | 85.3     | 88.3      | 85.6   | 83.6   | 83.7  | 83.8  | 83.3  | 83.4    | 99.7       | 104.1    | 115.3     | 122.1     | 99.7     |
| 1917.....           | 118.5    | 123.5     | 126.0  | 135.6  | 164.1 | 183.0 | 177.1 | 178.1   | 161.9      | 169.8    | 168.8     | 166.0     | 156.5    |
| 1918.....           | 170.3    | 174.8     | 201.0  | 235.1  | 221.1 | 187.6 | 169.9 | 163.9   | 159.3      | 154.0    | 152.6     | 151.6     | 167.4    |
| 1919.....           | 150.7    | 140.4     | 132.2  | 145.8  | 155.5 | 143.7 | 133.6 | 149.7   | 135.3      | 138.8    | 139.8     | 133.2     | 138.5    |
| 1920.....           | 132.3    | 134.5     | 145.0  | 156.1  | 183.1 | 183.9 | 159.0 | 168.6   | 168.9      | 162.3    | 142.1     | 126.8     | 155.1    |
| 1921.....           | 124.7    | 131.5     | 126.1  | 118.7  | 105.3 | 112.2 | 103.8 | 98.1    | 89.9       | 88.6     | 74.6      | 70.2      | 96.5     |
| Average 1912-1921.. | 110.1    | 112.9     | 113.0  | 118.6  | 122.5 | 120.7 | 116.5 | 113.0   | 111.3      | 111.0    | 108.1     | 107.0     | 111.4    |

TABLE 82.—*Rye: Monthly and yearly average price per bushel of No. 2, Chicago, 1910-11 to 1921-22.<sup>1</sup>*

| Crop year         | July.  | August. | September. | October. | November. | December. | January. | February. | March. | April. | May.   | June.  | Average. |
|-------------------|--------|---------|------------|----------|-----------|-----------|----------|-----------|--------|--------|--------|--------|----------|
| 1910-11.....      | \$0.77 | \$0.75  | \$0.74     | \$0.76   | \$0.79    | \$0.81    | \$0.84   | \$0.82    | \$0.89 | \$0.95 | \$1.02 | \$0.90 | \$0.84   |
| 1911-12.....      | .84    | .85     | .91        | .97      | .95       | .93       | .94      | .92       | .91    | .94    | .93    | .93    | .91      |
| 1912-13.....      | .74    | .72     | .69        | .69      | .64       | .61       | .64      | .63       | .60    | .62    | .62    | .62    | .65      |
| 1913-14.....      | .63    | .66     | .67        | .65      | .64       | .63       | .61      | .62       | .61    | .62    | .65    | .63    | .64      |
| 1914-15.....      | .64    | .84     | .95        | .92      | 1.02      | 1.10      | 1.19     | 1.23      | 1.17   | 1.17   | 1.19   | 1.17   | 1.05     |
| 1915-16.....      | 1.08   | 1.00    | .96        | 1.01     | .99       | .97       | 1.01     | .97       | .93    | .96    | .98    | .98    | .99      |
| 1916-17.....      | .98    | 1.13    | 1.20       | 1.33     | 1.47      | 1.41      | 1.43     | 1.46      | 1.61   | 1.57   | 2.20   | 2.40   | 1.54     |
| 1917-18.....      | 2.27   | 1.90    | 1.83       | 1.84     | 1.78      | 1.82      | 2.01     | 2.39      | 2.84   | 2.64   | 2.20   | 1.80   | 2.11     |
| 1918-19.....      | 1.73   | 1.67    | 1.63       | 1.63     | 1.68      | 1.59      | 1.61     | 1.38      | 1.61   | 1.73   | 1.69   | 1.46   | 1.61     |
| 1919-20.....      | 1.55   | 1.54    | 1.40       | 1.38     | 1.42      | 1.66      | 1.76     | 1.56      | 1.72   | 1.99   | 2.13   | 2.27   | 1.70     |
| 1920-21.....      | 2.04   | 1.90    | 1.99       | 1.89     | 1.59      | 1.61      | 1.63     | 1.47      | 1.48   | 1.35   | 1.47   | 1.32   | 1.62     |
| 1921-22.....      | 1.27   | 1.07    | 1.04       | .88      | .79       | .88       | .....    | .....     | .....  | .....  | .....  | .....  | .....    |
| 11-year average.. | 1.21   | 1.18    | 1.18       | 1.17     | 1.18      | 1.19      | 1.24     | 1.22      | 1.30   | 1.35   | 1.30   | 1.31   | 1.24     |

<sup>1</sup> From Howard Bartal's "Red Book."

RYE—Continued.

TABLE 83.—Rye (including flour): International trade, calendar years 1911-1920.

| Country.                                    | Average 1911-1913         |                           | 1918                      |                           | 1919                      |                           | 1920                      |                           |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|   | Imports.                  | Exports.                  | Imports.                  | Exports.                  | Imports.                  | Exports.                  | Imports.                  | Exports.                  |
| <b>PRINCIPAL EXPORT-<br/>ING COUNTRIES.</b> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| Argentina.....                              | ( <sup>1</sup> )          | 443                       |                           | 2                         |                           | 160                       |                           |                           |
| Bulgaria.....                               | 1                         | 2,336                     |                           |                           |                           |                           |                           | 17                        |
| Canada.....                                 | 86                        | 69                        | 295                       | 798                       | 10                        | 1,897                     | 21                        | 3,143                     |
| Germany.....                                | 16,900                    | 44,951                    |                           |                           |                           |                           | 17,396                    | 850                       |
| Roumania.....                               | 49                        | 3,411                     |                           |                           | 101                       |                           |                           | 1,560                     |
| Russia.....                                 | 5,231                     | 34,921                    |                           |                           |                           |                           |                           |                           |
| United States.....                          |                           | 855                       |                           | 16,308                    |                           | 40,494                    |                           | 59,253                    |
| <b>PRINCIPAL IMPORT-<br/>ING COUNTRIES.</b> |                           |                           |                           |                           |                           |                           |                           |                           |
| Austria-Hungary.....                        | 1,224                     | 19                        |                           |                           | 1,724                     | 1                         | 3,768                     | 64                        |
| Belgium.....                                | 6,157                     | 914                       |                           |                           |                           |                           |                           | 965                       |
| Denmark.....                                | 8,587                     | 303                       | ( <sup>1</sup> )          | 641                       | 398                       | 748                       | 90                        |                           |
| Finland.....                                | 15,472                    | 47                        | 345                       | ( <sup>1</sup> )          | 4,672                     | ( <sup>1</sup> )          | 2,618                     |                           |
| France.....                                 | 4,138                     | 7                         | 1,346                     | 1                         | 665                       | 15                        | 16,351                    | 14                        |
| Italy.....                                  | 721                       | 2                         | 3,506                     | ( <sup>1</sup> )          | 379                       | 9                         | 2,391                     | ( <sup>1</sup> )          |
| Netherlands.....                            | 31,023                    | 18,870                    | 751                       | ( <sup>1</sup> )          | 1,908                     | 483                       | 602                       | 2,099                     |
| Norway.....                                 | 10,520                    | 42                        | 3,096                     |                           | 6,190                     | 4                         | 8,374                     | 10                        |
| Sweden.....                                 | 3,769                     | 40                        | 138                       | 140                       | 1                         | 96                        | 5                         | 681                       |
| Switzerland.....                            | 729                       | 1                         | 452                       | ( <sup>1</sup> )          | 1,632                     | ( <sup>1</sup> )          | 153                       |                           |
| United Kingdom.....                         | 2,195                     | 4                         | 5,300                     | 8                         | 1,620                     | 3                         | 2,067                     | 192                       |
| Other countries.....                        | 541                       | 352                       | 5                         | 89                        | 49                        | 45                        | 540                       | 608                       |
| <b>Total.....</b>                           | <b>107,343</b>            | <b>107,587</b>            | <b>15,233</b>             | <b>17,987</b>             | <b>19,345</b>             | <b>43,955</b>             | <b>51,276</b>             | <b>69,448</b>             |

<sup>1</sup> Less than 500 bushels.

BUCKWHEAT.

TABLE 84.—Buckwheat: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See headnote of Table 4.]

| Year.        | Acreage (thousands of acres). | Average yield per acre (bushels). | Production (thousands of bushels). | Average farm price Dec. 1 (cents per bushel). | Farm value Dec. 1 (thousands of dollars). | Domestic exports year beginning July 1 (bushels). | Year.     | Acreage (thousands of acres). | Average yield per acre (bushels). | Production (thousands of bushels). | Average farm price Dec. 1 (cents per bushel). | Farm value Dec. 1 (thousands of dollars). | Domestic exports year beginning (bushels). |
|--------------|-------------------------------|-----------------------------------|------------------------------------|---|---|---|-----------|-------------------------------|-----------------------------------|------------------------------------|---|---|--|
| 1849.....    |                               |                                   | 8,987                              |   |   |   | 1907..... | 838                           | 17.7                              | 14,858                             | 70.0  | 10,307                                    | 116,127                                    |
| 1850.....    |                               |                                   | 17,578                             |   |   |   | 1908..... | 353                           | 19.4                              | 16,541                             | 75.7  | 72,518                                    | 186,702                                    |
| 1866-75..... | 730                           | 18.3                              | 13,369                             | 72.8  | 9,785                                     |   | 1909..... | 878                           | 20.5                              | 17,983                             | 70.2  | 12,628                                    | 153,160                                    |
| 1876-85..... | 799                           | 14.5                              | 11,616                             | 64.7  | 7,510                                     |   | 1910..... | 1,860                         | 20.5                              | 17,598                             | 66.1  | 11,636                                    | 223  |
| 1886-95..... | 879                           | 14.6                              | 12,854                             | 54.7  | 7,031                                     |   | 1911..... | 833                           | 21.1                              | 17,549                             | 72.6  | 12,735                                    | 180  |
| 1896.....    | 853                           | 18.5                              | 15,805                             | 39.3  | 6,211                                     | 1,677,102   | 1912..... | 841                           | 22.9                              | 19,240                             | 66.1  | 12,720                                    | 1,347                                      |
| 1897.....    | 838                           | 20.0                              | 17,260                             | 42.1  | 7,259                                     | 1,370,403   | 1913..... | 805                           | 17.2                              | 13,833                             | 75.5  | 10,445                                    | 580  |
| 1898.....    | 811                           | 17.2                              | 13,961                             | 45.0  | 6,278                                     | 1,533,980   | 1914..... | 792                           | 21.3                              | 16,881                             | 76.4  | 12,822                                    | 413,643                                    |
| 1899.....    | 807                           | 16.1                              | 13,001                             | 55.9  | 7,263                                     | 426,822   | 1915..... | 769                           | 19.6                              | 15,066                             | 78.7  | 11,843                                    | 515,304                                    |
| 1900.....    | 796                           | 14.9                              | 11,810                             | 55.8  | 6,588                                     | 123,540   | 1916..... | 828                           | 14.1                              | 11,662                             | 112.7   | 13,147                                    | 280,102                                    |
| 1901.....    | 852                           | 18.4                              | 15,698                             | 50.4  | 8,857                                     | 713,618   | 1917..... | 924                           | 17.3                              | 16,022                             | 160.0   | 25,631                                    | 5,567                                      |
| 1902.....    | 856                           | 17.9                              | 15,296                             | 59.6  | 9,110                                     | 117,863   | 1918..... | 1,027                         | 16.5                              | 16,905                             | 168.5   | 28,142                                    | 119,516                                    |
| 1903.....    | 870                           | 17.5                              | 15,245                             | 60.8  | 9,277                                     | 31,066  | 1919..... | 1,700                         | 20.0                              | 14,393                             | 148.1   | 21,032                                    | 244,785                                    |
| 1904.....    | 876                           | 18.6                              | 16,327                             | 62.5  | 10,208                                    | 316,399   | 1920..... | 701                           | 18.7                              | 13,142                             | 128.3   | 16,863                                    | 399,437                                    |
| 1905.....    | 840                           | 18.8                              | 15,797                             | 58.6  | 9,261                                     | 895,813   | 1921..... | 671                           | 21.0                              | 14,079                             | 81.2  | 11,438                                    |  |
| 1906.....    | 805                           | 18.2                              | 15,734                             | 59.7  | 9,388                                     | 199,429   |           |                               |                                   |                                    |   |   |  |

<sup>1</sup> Acreage adjusted to census basis.

<sup>2</sup> Preliminary estimate.

## BUCKWHEAT—Continued.

TABLE 85.—*Buckwheat: Acreage, production, and total farm value, by States, 1920-21.*

| State.              | Thousands of acres: |      | Production (thousands of bushels). |        | Total value, basis Dec. 1 price (thousands of dollars). |        |
|---------------------|---------------------|------|------------------------------------|--------|---|--------|
|                     | 1920                | 1921 | 1920                               | 1921   | 1920  | 1921   |
| Maine.....          | 14                  | 13   | 378                                | 351    | 578   | 351    |
| New Hampshire.....  | 1                   | 1    | 20                                 | 21     | 24  | 18     |
| Vermont.....        | 4                   | 4    | 84                                 | 88     | 113   | 79     |
| Massachusetts.....  | 1                   | 1    | 19                                 | 18     | 27  | 22     |
| Connecticut.....    | 2                   | 2    | 34                                 | 35     | 54  | 49     |
| New York.....       | 215                 | 193  | 4,300                              | 4,150  | 6,020   | 3,444  |
| New Jersey.....     | 8                   | 8    | 144                                | 168    | 216   | 168    |
| Pennsylvania.....   | 232                 | 225  | 4,176                              | 5,175  | 5,011   | 3,881  |
| Delaware.....       | 7                   | 7    | 126                                | 98     | 151   | 74     |
| Maryland.....       | 12                  | 9    | 240                                | 171    | 319   | 145    |
| Virginia.....       | 19                  | 17   | 410                                | 357    | 574   | 293    |
| West Virginia.....  | 32                  | 31   | 624                                | 632    | 874   | 559    |
| North Carolina..... | 6                   | 5    | 120                                | 85     | 132   | 72     |
| Ohio.....           | 26                  | 21   | 543                                | 525    | 570   | 551    |
| Indiana.....        | 6                   | 6    | 120                                | 114    | 144   | 114    |
| Illinois.....       | 4                   | 4    | 72                                 | 70     | 98  | 77     |
| Michigan.....       | 40                  | 39   | 580                                | 624    | 632   | 437    |
| Wisconsin.....      | 27                  | 40   | 432                                | 596    | 518   | 447    |
| Minnesota.....      | 25                  | 27   | 400                                | 432    | 424   | 302    |
| Iowa.....           | 6                   | 5    | 102                                | 75     | 137   | 60     |
| Missouri.....       | 1                   | 1    | 16                                 | 14     | 25  | 21     |
| Nebraska.....       | 1                   | 1    | 16                                 | 16     | 16  | 13     |
| Kentucky.....       | 8                   | 8    | 120                                | 160    | 120   | 160    |
| Tennessee.....      | 4                   | 3    | 66                                 | 54     | 86  | 51     |
| United States.....  | 701                 | 671  | 13,142                             | 14,079 | 16,863  | 11,438 |

TABLE 86.—*Buckwheat: Condition of crop, United States, on first of months named, 1901-1921.*

| Year.    | Aug.   | Sept.  | When harvested. | Year.    | Aug.   | Sept.  | When harvested. | Year.    | Aug.   | Sept.  | When harvested. |
|----------|--------|--------|-----------------|----------|--------|--------|-----------------|----------|--------|--------|-----------------|
| 1901.... | P. ct. | P. ct. | P. ct.          | 1908.... | P. ct. | P. ct. | P. ct.          | 1915.... | P. ct. | P. ct. | P. ct.          |
| 1902.... | 91.1   | 90.9   | 90.5            | 1909.... | 89.4   | 87.8   | 81.6            | 1916.... | 92.6   | 88.6   | 81.9            |
| 1903.... | 91.4   | 86.4   | 80.5            | 1910.... | 86.4   | 81.0   | 79.5            | 1917.... | 87.8   | 78.5   | 66.9            |
| 1904.... | 93.9   | 91.0   | 83.0            | 1911.... | 87.9   | 82.3   | 81.7            | 1918.... | 92.2   | 90.2   | 74.8            |
| 1905.... | 92.8   | 91.5   | 88.7            | 1912.... | 82.9   | 83.8   | 81.4            | 1919.... | 88.6   | 83.3   | 75.6            |
| 1906.... | 92.6   | 91.8   | 91.6            | 1913.... | 88.4   | 91.6   | 89.2            | 1920.... | 88.1   | 90.1   | 88.0            |
| 1907.... | 93.2   | 91.2   | 84.9            | 1914.... | 85.5   | 75.4   | 65.9            | 1921.... | 90.5   | 91.1   | 85.6            |
|          | 91.9   | 77.4   | 80.1            |          | 88.8   | 87.1   | 83.3            |          | 87.2   | 85.6   | 87.4            |

TABLE 87.—*Buckwheat: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

| Year.        | August.  | September. | October. | November production estimate. | Final estimate. |
|--------------|----------|------------|----------|-------------------------------|-----------------|
|              | Bushels. | Bushels.   | Bushels. | Bushels.                      | Bushels.        |
| 1912.....    | 16,000   | 13,000     | 13,000   | 19,124                        | 19,249          |
| 1913.....    | 17,000   | 15,000     | 14,000   | 14,455                        | 13,833          |
| 1914.....    | 16,897   | 17,106     | 16,882   | 17,025                        | 16,881          |
| 1915.....    | 17,651   | 17,556     | 16,738   | 16,350                        | 15,056          |
| 1916.....    | 17,114   | 15,788     | 13,922   | 11,447                        | 11,662          |
| 1917.....    | 19,876   | 20,226     | 17,895   | 16,813                        | 16,022          |
| 1918.....    | 20,623   | 20,093     | 19,473   | 13,370                        | 16,905          |
| 1919.....    | 18,002   | 19,193     | 20,076   | 20,120                        | 14,399          |
| 1920.....    | 14,790   | 15,528     | 15,532   | 14,321                        | 13,142          |
| Average..... | 17,550   | 17,610     | 16,946   | 16,447                        | 15,239          |
| 1921.....    | 12,957   | 13,042     | 14,263   | 14,894                        | 14,079          |

1 Preliminary.

## BUCKWHEAT—Continued.

TABLE 88.—Buckwheat: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.   | Yield per acre (bushels).  |       |       |       |       | Farm price per bushel (cents). |                             |       |       |       |       |       |       |       |       | Value per acre (dollars). <sup>1</sup> |       |                            |       |
|----------|----------------------------|-------|-------|-------|-------|--------------------------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|----------------------------|-------|
|          | 5-year average, 1917-1921. | 1917. | 1918. | 1919. | 1920. | 1921.                          | 10-year average, 1912-1921. | 1912. | 1913. | 1914. | 1915. | 1916. | 1917. | 1918. | 1919. | 1920.                                  | 1921. | 5-year average, 1916-1920. | 1921. |
|          |                            |       |       |       |       |                                |                             |       |       |       |       |       |       |       |       |  |       |                            |       |
| Me.      | 23.9                       | 21.5  | 20.0  | 24.0  | 27.0  | 27.0                           | 108                         | 70    | 56    | 60    | 70    | 95    | 150   | 150   | 175   | 153                                    | 100   | 33.67                      | 27.00 |
| N. H.    | 18.4                       | 16.0  | 17.0  | 18.0  | 20.0  | 21.0                           | 114                         | 72    | 66    | 70    | 81    | 100   | 183   | 200   | 156   | 122                                    | 88    | 27.15                      | 18.48 |
| Vt.      | 21.2                       | 20.0  | 21.0  | 22.0  | 21.0  | 22.0                           | 113                         | 72    | 80    | 82    | 82    | 105   | 150   | 160   | 170   | 135                                    | 90    | 29.55                      | 19.80 |
| Mass.    | 17.6                       | 15.0  | 16.0  | 20.0  | 19.0  | 18.0                           | 127                         | 85    | 80    | 84    | 95    | 140   | 166   | 196   | 160   | 140                                    | 125   | 27.45                      | 22.50 |
| Conn.    | 17.8                       | 17.3  | 19.0  | 18.0  | 17.0  | 17.5                           | 140                         | 88    | 95    | 95    | 96    | 120   | 200   | 210   | 200   | 160                                    | 139   | 32.10                      | 24.32 |
| N. Y.    | 19.3                       | 18.0  | 15.0  | 22.0  | 20.0  | 21.5                           | 113                         | 64    | 81    | 76    | 80    | 122   | 160   | 175   | 145   | 140                                    | 83    | 25.92                      | 17.84 |
| N. J.    | 18.6                       | 18.0  | 18.0  | 18.0  | 18.0  | 21.0                           | 115                         | 72    | 76    | 83    | 83    | 108   | 158   | 170   | 150   | 150                                    | 100   | 28.71                      | 21.00 |
| Pa.      | 19.7                       | 18.0  | 18.0  | 21.0  | 18.0  | 23.0                           | 106                         | 64    | 73    | 76    | 78    | 111   | 163   | 160   | 140   | 120                                    | 75    | 25.10                      | 17.25 |
| Del.     | 18.1                       | 20.0  | 20.5  | 18.0  | 18.0  | 14.0                           | 105                         | 66    | 69    | 76    | 75    | 118   | 148   | 143   | 160   | 120                                    | 75    | 26.35                      | 10.50 |
| Md.      | 20.6                       | 21.0  | 20.0  | 23.0  | 20.0  | 19.0                           | 111                         | 71    | 75    | 81    | 72    | 110   | 165   | 165   | 155   | 133                                    | 85    | 30.16                      | 16.15 |
| Va.      | 20.7                       | 21.1  | 21.0  | 19.0  | 21.6  | 21.0                           | 110                         | 75    | 80    | 84    | 80    | 95    | 150   | 163   | 155   | 140                                    | 82    | 28.76                      | 17.22 |
| W. Va.   | 20.4                       | 20.0  | 19.5  | 21.0  | 19.5  | 22.0                           | 115                         | 75    | 78    | 83    | 80    | 101   | 170   | 173   | 170   | 140                                    | 82    | 29.84                      | 18.04 |
| N. C.    | 18.8                       | 20.0  | 20.0  | 17.0  | 20.0  | 17.0                           | 108                         | 85    | 78    | 83    | 82    | 85    | 130   | 150   | 140   | 110                                    | 85    | 23.94                      | 14.45 |
| Ohio.    | 20.5                       | 17.2  | 16.0  | 23.2  | 20.0  | 25.0                           | 108                         | 70    | 76    | 76    | 77    | 110   | 153   | 156   | 155   | 105                                    | 105   | 25.73                      | 26.25 |
| Ind.     | 17.1                       | 15.0  | 15.0  | 16.5  | 20.0  | 19.0                           | 110                         | 73    | 75    | 78    | 80    | 112   | 155   | 160   | 150   | 120                                    | 100   | 23.23                      | 19.00 |
| Ill.     | 18.0                       | 19.0  | 17.8  | 18.0  | 18.0  | 17.4                           | 125                         | 80    | 80    | 95    | 90    | 130   | 170   | 180   | 180   | 136                                    | 110   | 28.66                      | 19.14 |
| Mich.    | 12.7                       | 9.0   | 10.0  | 13.8  | 14.5  | 16.0                           | 103                         | 65    | 70    | 71    | 72    | 115   | 147   | 170   | 137   | 109                                    | 78    | 15.52                      | 12.48 |
| Wis.     | 15.0                       | 12.2  | 15.9  | 16.2  | 16.0  | 14.9                           | 109                         | 66    | 69    | 76    | 83    | 116   | 174   | 165   | 150   | 120                                    | 75    | 21.44                      | 11.18 |
| Minn.    | 16.4                       | 14.0  | 17.0  | 19.0  | 16.0  | 16.0                           | 100                         | 65    | 64    | 70    | 75    | 112   | 135   | 170   | 130   | 106                                    | 70    | 21.25                      | 11.20 |
| Iowa.    | 14.6                       | 12.0  | 15.0  | 14.0  | 17.0  | 15.0                           | 120                         | 75    | 81    | 77    | 80    | 125   | 200   | 180   | 169   | 134                                    | 80    | 23.24                      | 12.00 |
| Mo.      | 14.6                       | 15.0  | 13.0  | 15.0  | 16.0  | 14.0                           | 131                         | 95    | 85    | 93    | 90    | 133   | 144   | 180   | 184   | 155                                    | 150   | 23.20                      | 21.00 |
| Nebr.    | 15.6                       | 16.0  | 14.0  | 16.0  | 16.0  | 16.0                           | 113                         | 90    | 79    | 84    | 95    | 110   | 150   | 165   | 180   | 100                                    | 80    | 22.12                      | 12.80 |
| Ky.      | 16.0                       | 18.0  | 14.0  | 13.0  | 15.0  | 20.0                           | .....                       | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 104   | 120                                    | 100   | .....                      | 20.00 |
| Tenn.    | 17.0                       | 17.0  | 18.0  | 15.5  | 16.5  | 18.0                           | 107                         | 78    | 75    | 78    | 76    | 100   | 150   | 140   | 150   | 130                                    | 95    | 22.68                      | 17.10 |
| U. S.... | 18.8                       | 17.3  | 16.5  | 20.6  | 18.7  | 21.0                           | 109.2                       | 66.1  | 75.5  | 76.4  | 78.7  | 112.7 | 160.0 | 166.5 | 146.1 | 128.3                                  | 81.2  | 25.03                      | 17.05 |

<sup>1</sup> Based upon farm price Dec. 1.

TABLE 89.—Buckwheat: Farm price, cents per bushel on first of each month, 1908-1921.

| Year.              | January. | February. | March. | April. | May.  | June. | July. | August. | September. | October. | November. | December. | Yearly average. |
|--------------------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|-----------------|
| 1908.              | 71.7     | 72.0      | 72.4   | 76.0   | 77.0  | 75.8  | 85.0  | 80.1    | 80.0       | 77.2     | 77.1      | 75.6      | 76.4            |
| 1909.              | 74.3     | 74.2      | 75.5   | 76.2   | 78.8  | 83.4  | 85.5  | 82.9    | 70.9       | 75.0     | 71.6      | 70.1      | 75.0            |
| 1910.              | 70.0     | 72.0      | 70.6   | 73.4   | 71.0  | 73.7  | 78.0  | 74.8    | 72.0       | 71.3     | 65.9      | 66.1      | 69.8            |
| 1911.              | 65.8     | 64.4      | 64.1   | 65.3   | 65.8  | 70.1  | 72.4  | 76.0    | 74.0       | 69.6     | 73.0      | 72.6      | 70.8            |
| 1912.              | 73.7     | 73.6      | 76.9   | 76.9   | 79.9  | 84.8  | 86.2  | 83.6    | 76.6       | 69.7     | 65.5      | 66.1      | 72.6            |
| 1913.              | 66.8     | 69.4      | 67.0   | 68.3   | 71.4  | 70.8  | 72.9  | 72.4    | 70.0       | 74.1     | 75.5      | 75.4      | 72.4            |
| 1914.              | 76.8     | 75.6      | 75.1   | 76.0   | 77.3  | 79.0  | 85.5  | 81.9    | 79.8       | 73.7     | 78.0      | 76.4      | 77.9            |
| 1915.              | 77.9     | 83.7      | 85.5   | 85.3   | 84.6  | 86.9  | 92.1  | 89.2    | 81.4       | 73.7     | 78.5      | 78.7      | 81.0            |
| 1916.              | 81.5     | 80.7      | 83.2   | 83.1   | 84.9  | 87.0  | 93.1  | 89.0    | 88.4       | 90.4     | 102.9     | 112.7     | 94.7            |
| 1917.              | 117.2    | 114.6     | 124.8  | 128.3  | 150.6 | 183.7 | 206.2 | 189.3   | 164.3      | 154.4    | 154.2     | 160.0     | 153.2           |
| 1918.              | 162.7    | 181.9     | 188.2  | 170.1  | 176.0 | 191.0 | 200.8 | 192.7   | 190.3      | 180.0    | 173.0     | 166.5     | 174.7           |
| 1919.              | 162.9    | 158.1     | 148.4  | 149.6  | 147.3 | 185.6 | 180.8 | 165.9   | 159.8      | 162.0    | 151.0     | 144.1     | 154.7           |
| 1920.              | 150.7    | 154.9     | 155.7  | 183.1  | 188.8 | 180.2 | 202.7 | 181.3   | 178.3      | 159.4    | 131.0     | 128.3     | 182.0           |
| 1921.              | 125.4    | 118.7     | 116.8  | 106.3  | 115.9 | 116.1 | 115.3 | 119.7   | 114.4      | 106.0    | 83.9      | 81.2      | 102.4           |
| Average 1912-1921. | 109.5    | 109.1     | 110.1  | 111.1  | 115.7 | 124.5 | 131.9 | 128.4   | 119.9      | 114.8    | 109.4     | 109.2     | 113.6           |

## FLAX.

TABLE 90.—Flax: Area and production in undermentioned countries, 1909-1920.

| Country.                         | Area (thousands of acres).         |       |       |       | Production.                        |        |        |        |                                    |        |         |         |
|----------------------------------|------------------------------------|-------|-------|-------|------------------------------------|--------|--------|--------|------------------------------------|--------|---------|---------|
|                                  | Average <sup>1</sup><br>1909-1913. | 1918  | 1919  | 1920  | Seed (thousands of bushels).       |        |        |        | Fiber (thousands of pounds).       |        |         |         |
|                                  |                                    |       |       |       | Average <sup>1</sup><br>1909-1913. | 1918   | 1919   | 1920   | Average <sup>1</sup><br>1909-1913. | 1918   | 1919    | 1920    |
| NORTH AMERICA.                   |                                    |       |       |       |                                    |        |        |        |                                    |        |         |         |
| United States.....               | 2,490                              | 1,910 | 1,503 | 1,757 | 19,805                             | 13,369 | 7,266  | 10,774 |                                    |        |         |         |
| Canada:                          |                                    |       |       |       |                                    |        |        |        |                                    |        |         |         |
| Quebec.....                      | 1                                  | 7     | 11    | 16    | 11                                 | 83     | 111    | 184    |                                    |        |         |         |
| Ontario.....                     | 8                                  | 16    | 14    | 21    | 128                                | 196    | 130    | 225    |                                    |        |         |         |
| Manitoba.....                    | 58                                 | 108   | 57    | 140   | 706                                | 1,091  | 520    | 1,168  |                                    |        |         |         |
| Saskatchewan.....                | 893                                | 841   | 930   | 1,141 | 10,393                             | 4,205  | 4,400  | 5,705  |                                    |        |         |         |
| Alberta.....                     | 76                                 | 96    | 81    | 104   | 830                                | 480    | 222    | 720    |                                    |        |         |         |
| Total Canada.....                | 1,036                              | 1,068 | 1,063 | 1,428 | 12,068                             | 6,055  | 5,473  | 7,908  |                                    |        |         |         |
| Mexico.....                      |                                    |       |       |       | 150                                |        |        |        |                                    |        |         |         |
| Total North America.....         | 3,526                              | 2,978 | 2,566 | 3,185 | 31,723                             | 19,424 | 12,729 | 18,772 |                                    |        |         |         |
| SOUTH AMERICA.                   |                                    |       |       |       |                                    |        |        |        |                                    |        |         |         |
| Argentina.....                   | 3,683                              | 3,229 | 3,419 | 3,522 | 31,989                             | 19,588 | 30,775 | 42,038 |                                    |        |         |         |
| Uruguay.....                     | 106                                | 30    | 51    | 83    | 793                                | 333    | 466    | 932    |                                    |        |         |         |
| Total South America.....         | 3,789                              | 3,259 | 3,470 | 3,605 | 32,782                             | 19,921 | 31,273 | 42,970 |                                    |        |         |         |
| EUROPE.                          |                                    |       |       |       |                                    |        |        |        |                                    |        |         |         |
| Austria.....                     | * 97                               | 13    | 7     | 8     | * 694                              | 35     |        | 38     | * 58,098                           |        | 4,080   | 4,906   |
| Croatia-Slavonia.....            | 17                                 |       |       |       | 21                                 |        |        |        | 8,046                              |        |         |         |
| Bosnia-Herzegovina.....          |                                    |       |       |       | 4                                  |        |        |        | 1,080                              |        |         |         |
| Belgium.....                     | 50                                 |       | 54    | 125   | 443                                |        | 476    | 892    | 46,487                             |        | 47,880  | 152,830 |
| Bulgaria.....                    | * 1                                | 1     | 1     | 1     | * 7                                |        |        | 13     | * 524                              |        | 186     | 550     |
| Czechoslovakia.....              |                                    |       | * 37  | 54    |                                    |        | * 222  | 313    |                                    |        | 16,890  | 28,830  |
| France.....                      | * 61                               | * 28  | 52    | 70    | * 533                              | 188    | 347    | 446    | * 40,622                           | 15,110 | 35,299  | 82,960  |
| Hungary.....                     | * 24                               |       |       | 9     | * 196                              |        |        |        | * 20,548                           |        |         |         |
| Ireland.....                     | 53                                 | 145   | 96    | 127   |                                    |        |        |        | 23,701                             | 35,175 | 30,734  | 35,950  |
| Italy.....                       | 22                                 | 48    | 47    | 69    | 320                                | 472    | 433    | 880    | 6,289                              | 5,291  | 5,291   | 5,070   |
| Netherlands.....                 | * 33                               | 14    | 24    | 60    | 374                                | 176    | 287    | 610    | 17,270                             | 7,674  | 11,350  | 31,420  |
| Rumania.....                     | 52                                 | * 180 | * 48  | * 81  | * 503                              | * 292  | * 305  | * 139  | * 4,564                            | 4,453  | * 2,203 |         |
| Russia proper <sup>2</sup> ..... | 3,217                              |       |       |       | 19,772                             |        |        |        | 1,022,484                          |        |         |         |
| Poland <sup>3</sup> .....        | * 83                               |       | 7 76  | 101   | * 874                              |        | 556    |        | * 42,450                           |        |         |         |
| Northern Caucasus.....           | 104                                |       |       |       | 679                                |        |        |        | 26,130                             |        |         |         |
| Serbia.....                      | * 4                                |       |       |       |                                    |        |        |        | 21,812                             |        |         |         |
| Spain.....                       |                                    | 4     | 2     | 3     |                                    | 65     | 42     | 62     |                                    | 6,768  | 970     | 710     |
| Sweden.....                      | 4                                  | 5     |       | 7     | 15                                 |        |        |        | * 1,208                            |        |         |         |
| Total Europe.....                | 3,827                              |       |       |       | 24,435                             |        |        |        | 1,316,618                          |        |         |         |
| ASIA.                            |                                    |       |       |       |                                    |        |        |        |                                    |        |         |         |
| British India <sup>4</sup> ..... | 3,821                              | 3,797 | 1,989 | 3,108 | 19,773                             | 20,600 | 9,400  | 16,760 |                                    |        |         |         |
| Japan.....                       | 12                                 | 85    | 66    | * 83  |                                    | 648    | 492    |        | 30,008                             | 24,511 | 19,300  |         |
| Russia, Asiatic.....             | 288                                |       |       |       | 1,456                              |        |        |        | 96,402                             |        |         |         |
| Total Asia.....                  | 4,118                              |       |       |       | 21,229                             |        |        |        | 126,589                            |        |         |         |
| AFRICA.                          |                                    |       |       |       |                                    |        |        |        |                                    |        |         |         |
| Algeria.....                     |                                    |       | 1     | 1     | 11                                 |        | 7      | 7      |                                    |        |         |         |
| Egypt.....                       |                                    |       | 3     | 6     |                                    |        | 57     | 112    |                                    |        |         | 3,186   |
| Grand total.....                 | 15,261                             |       |       |       | 110,180                            |        |        |        | 1,443,207                          |        |         |         |

<sup>1</sup> Five-year average except in a few cases where statistics were unavailable.<sup>2</sup> Old boundaries.<sup>3</sup> Bohemia and Moravia only.<sup>4</sup> Includes Bessarabia but excludes Dobruja.<sup>5</sup> Former Kingdom and Bessarabia.<sup>6</sup> Former Kingdom, Bessarabia and Bukovina.<sup>7</sup> Former Russian Poland and Western Galicia.<sup>8</sup> Includes some native States.<sup>9</sup> Unofficial.

FLAX—Continued.

TABLE 91.—Flax (seed and fiber): World production as far as reported, 1896-1920.

| Year.     | Production.     |                | Year.     | Production.     |                |
|-----------|-----------------|----------------|-----------|-----------------|----------------|
|           | Seed.           | Fiber.         |           | Seed.           | Fiber.         |
|           | <i>Bushels.</i> | <i>Pounds.</i> |           | <i>Bushels.</i> | <i>Pounds.</i> |
| 1896..... | 82,684,000      | 1,714,205,000  | 1909..... | 100,820,000     | 1,354,524,000  |
| 1897..... | 57,596,000      | 1,498,054,000  | 1910..... | 85,253,000      | 913,112,000    |
| 1898..... | 72,938,000      | 1,780,693,000  | 1911..... | 101,339,000     | 1,011,350,000  |
| 1899..... | 66,348,000      | 1,138,763,000  | 1912..... | 130,291,000     | 1,429,967,000  |
| 1900..... | 62,432,000      | 1,315,831,000  | 1913..... | 132,477,000     | 1,384,757,000  |
| 1901..... | 72,314,000      | 1,050,290,000  | 1914..... | 94,559,000      | 1,044,740,000  |
| 1902..... | 83,891,000      | 1,564,840,000  | 1915..... | 103,287,000     | 975,635,000    |
| 1903..... | 110,455,000     | 1,492,383,000  | 1916..... | 82,151,000      | 175,239,000    |
| 1904..... | 107,743,000     | 1,517,922,000  | 1917..... | 41,063,000      | 162,952,000    |
| 1905..... | 100,458,000     | 1,494,229,000  | 1918..... | 61,821,000      | 98,982,000     |
| 1906..... | 89,165,000      | 1,871,723,000  | 1919..... | 56,611,000      | 173,267,000    |
| 1907..... | 102,960,000     | 2,042,390,000  | 1920..... | 81,480,000      | 346,420,000    |
| 1908..... | 100,850,000     | 1,907,591,000  |           |                 |                |

TABLE 92.—Flaxseed: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See headnote of Table 4.]

| Year.                   | Acreage.      | Average yield per acre. | Production.     | Average farm price per bushel Dec. 1. | Farm value Dec. 1. | Domestic exports, fiscal year beginning July 1. | Imports, fiscal year beginning July 1. |
|-------------------------|---------------|-------------------------|-----------------|---------------------------------------|--------------------|---|--|
|                         | <i>Acres.</i> | <i>Bushels.</i>         | <i>Bushels.</i> | <i>Cents.</i>                         | <i>Dollars.</i>    | <i>Bushels.</i>                                 | <i>Bushels.</i>                        |
| 1849.....               |               |                         | 532,000         |                                       |                    | 2,501   | 667,360                                |
| 1850.....               |               |                         | 667,000         |                                       |                    | 2,715   | 1,300,000                              |
| 1859.....               |               |                         | 1,730,000       |                                       |                    | 35  | 1,500,000                              |
| 1879.....               |               |                         | 7,171,000       |                                       |                    |   | 1,434,195                              |
| 1889.....               | 1,819,000     | 7.8                     | 10,260,000      |                                       |                    | 14,678  | 2,361,175                              |
| 1899.....               | 2,111,000     | 9.5                     | 19,979,000      |                                       |                    | 2,830,991                                       | 67,379                                 |
| 1902.....               | 3,740,000     | 7.8                     | 29,285,000      | 105.2                                 | 30,815,000         | 4,128,130                                       | 120,089                                |
| 1903.....               | 3,223,000     | 8.4                     | 27,301,000      | 81.7                                  | 22,292,000         | 758,379   | 213,270                                |
| 1904.....               | 2,264,000     | 10.3                    | 23,401,000      | 99.3                                  | 23,329,000         | 1,338   | 296,184                                |
| 1905.....               | 2,535,000     | 11.2                    | 28,478,000      | 84.4                                  | 24,049,000         | 5,988,519                                       | 52,240                                 |
| 1908.....               | 2,500,000     | 10.2                    | 25,576,000      | 101.3                                 | 25,899,000         | 6,336,310                                       | 90,358                                 |
| 1907.....               | 2,864,000     | 9.0                     | 25,851,000      | 95.6                                  | 24,713,000         | 4,277,313                                       | 57,419                                 |
| 1908.....               | 2,679,000     | 9.6                     | 25,805,000      | 118.4                                 | 30,677,000         | 882,899   | 593,668                                |
| 1909.....               | 2,089,000     | 9.5                     | 19,699,000      | 152.8                                 | 30,008,000         | 66,193  | 5,002,498                              |
| 1910 <sup>1</sup> ..... | 2,467,000     | 5.2                     | 12,718,000      | 211.7                                 | 24,472,000         | 978   | 10,499,227                             |
| 1911.....               | 2,757,000     | 7.0                     | 19,370,000      | 182.1                                 | 35,272,000         | 4,323   | 6,841,808                              |
| 1912.....               | 2,851,000     | 9.8                     | 28,073,000      | 114.7                                 | 32,202,000         | 16,894  | 5,294,298                              |
| 1913.....               | 2,291,000     | 7.8                     | 17,853,000      | 119.9                                 | 21,399,000         | 305,546   | 8,653,238                              |
| 1914.....               | 1,645,000     | 8.4                     | 13,740,000      | 126.0                                 | 17,318,000         | 4,145   | 10,608,215                             |
| 1915.....               | 1,387,000     | 10.1                    | 14,030,000      | 174.0                                 | 24,410,000         | 2,614   | 14,679,288                             |
| 1916.....               | 1,474,000     | 9.7                     | 14,296,000      | 248.6                                 | 35,541,000         | 1,017   | 12,393,938                             |
| 1917.....               | 1,984,000     | 4.6                     | 9,164,000       | 206.6                                 | 27,182,000         | 21,481  | 13,266,829                             |
| 1918.....               | 1,910,000     | 7.0                     | 13,369,000      | 310.1                                 | 45,470,000         | 15,874  | 8,426,836                              |
| 1919 <sup>2</sup> ..... | 1,503,000     | 4.8                     | 7,256,000       | 438.3                                 | 31,802,000         | 24,044  | 22,291,894                             |
| 1920.....               | 1,757,000     | 8.1                     | 10,774,000      | 176.7                                 | 19,039,000         | 11,481  | 16,170,415                             |
| 1921 <sup>3</sup> ..... | 1,166,000     | 7.0                     | 8,112,000       | 144.6                                 | 11,732,000         |   |  |

<sup>1</sup> Approximate.

<sup>2</sup> Acreage adjusted to census basis.

<sup>3</sup> Preliminary estimate.

## FLAX—Continued.

TABLE 93.—*Flaxseed: Acreage, production, and total farm value, by States, 1920-21.*

| State.             | Thousands of acres. |       | Production (thousands of bushels). |       | Total value, basis Dec. 1 price (thousands of dollars). |        |
|--------------------|---------------------|-------|------------------------------------|-------|---|--------|
|                    | 1920                | 1921  | 1920                               | 1921  | 1920  | 1921   |
| Wisconsin.....     | 9                   | 6     | 99                                 | 63    | 210   | 94     |
| Minnesota.....     | 320                 | 287   | 3,040                              | 2,726 | 5,563   | 4,116  |
| Iowa.....          | 11                  | 11    | 132                                | 96    | 238   | 147    |
| North Dakota.....  | 761                 | 396   | 4,083                              | 2,534 | 7,179   | 3,624  |
| South Dakota.....  | 220                 | 216   | 2,200                              | 1,404 | 3,680   | 1,952  |
| Nebraska.....      | 5                   | 3     | 45                                 | 24    | 70  | 36     |
| Kansas.....        | 23                  | 20    | 159                                | 134   | 286   | 181    |
| Montana.....       | 407                 | 225   | 1,053                              | 1,125 | 1,852   | 1,575  |
| Wyoming.....       | 1                   | 1     | 8                                  | 6     | 11  | 7      |
| United States..... | 1,757               | 1,165 | 10,774                             | 8,112 | 19,039  | 11,732 |

TABLE 94.—*Flaxseed: Condition of crop, United States, on first of months named, 1903-1921.*

| Year.   | July.         | Aug.          | Sept.         | Oct.          | Year.   | July.         | Aug.          | Sept.         | Oct.          | Year.   | July.         | Aug.          | Sept.         | Oct.          |
|---------|---------------|---------------|---------------|---------------|---------|---------------|---------------|---------------|---------------|---------|---------------|---------------|---------------|---------------|
|         | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> |         | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> |         | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> |
| 1903... | 86.2          | 80.3          | 80.5          | 74.0          | 1910... | 65.0          | 51.7          | 48.3          | 47.2          | 1917... | 84.0          | 60.6          | 50.2          | 51.3          |
| 1904... | 86.6          | 78.9          | 85.8          | 87.0          | 1911... | 80.9          | 71.0          | 68.4          | 69.6          | 1918... | 79.8          | 70.6          | 72.6          | 70.8          |
| 1905... | 92.7          | 96.7          | 94.2          | 91.5          | 1912... | 88.9          | 87.5          | 86.3          | 83.8          | 1919... | 73.5          | 52.7          | 50.5          | 52.6          |
| 1906... | 93.2          | 92.2          | 89.0          | 87.4          | 1913... | 82.0          | 77.4          | 74.9          | 74.7          | 1920... | 89.1          | 80.1          | 63.8          | 62.8          |
| 1907... | 91.2          | 91.9          | 85.4          | 78.0          | 1914... | 90.5          | 82.1          | 72.9          | 77.4          | 1921... | 82.7          | 70.0          | 62.3          | 66.8          |
| 1908... | 92.5          | 86.1          | 82.5          | 81.2          | 1915... | 88.5          | 91.2          | 87.6          | 84.5          |         |               |               |               |               |
| 1909... | 95.1          | 92.7          | 88.9          | 84.9          | 1916... | 90.3          | 84.0          | 81.8          | 86.2          |         |               |               |               |               |

TABLE 95.—*Flaxseed: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

| Year.        | July.           | August.         | September.      | October.        | November production estimate. | Final estimate.    |
|--------------|-----------------|-----------------|-----------------|-----------------|-------------------------------|--------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>               | <i>Bushels.</i>    |
| 1912.....    | 28,000          | 28,000          | 28,000          | 28,000          | 28,755                        | 28,073             |
| 1913.....    | 21,000          | 20,000          | 20,000          | 21,000          | 19,234                        | 17,853             |
| 1914.....    | 17,665          | 16,820          | 15,428          | 16,826          | 15,973                        | 13,749             |
| 1915.....    | 16,399          | 17,924          | 18,171          | 17,655          | 18,446                        | 14,030             |
| 1916.....    | 14,467          | 14,118          | 14,895          | 15,411          | 15,300                        | 14,296             |
| 1917.....    | 16,964          | 12,788          | 10,957          | 11,335          | 9,848                         | 9,164              |
| 1918.....    | 15,792          | 14,834          | 15,905          | 15,606          | 14,646                        | 13,369             |
| 1919.....    | 13,232          | 10,239          | 10,195          | 10,652          | 9,450                         | 7,256              |
| 1920.....    | 14,398          | 14,260          | 11,821          | 11,704          | 10,735                        | 10,774             |
| Average..... | 17,546          | 16,554          | 16,263          | 16,577          | 15,910                        | 14,265             |
| 1921.....    | 9,671           | 8,911           | 8,252           | 8,878           | 8,509                         | <sup>1</sup> 8,112 |

<sup>1</sup> Preliminary.

FLAX—Continued.

TABLE 96.—*Flaxseed: Yield per acre, price per bushel Dec. 1, and value per acre, by States.*

| State.  | Yield per acre (bushels).  |      |      |      |      |      | Farm price per bushel (cents). |       |       |       |       |       |       |       |       |       |       |                            | Value per acre (dollars). <sup>1</sup> |  |
|---------|----------------------------|------|------|------|------|------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------------|--|--|
|         | 5-year average, 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921 | 10-year average, 1912-1921.    | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918  | 1919  | 1920  | 1921  | 5-year average, 1916-1920. | 1921                                   |  |
| Wis...  | 10.8                       | 11.0 | 10.5 | 11.0 | 10.5 | 10.5 | 213                            | 127   | 123   | 125   | 180   | 240   | 295   | 341   | 430   | 212   | 150   | 33.39                      | 15.75                                  |  |
| Minn... | 9.4                        | 9.5  | 10.4 | 8.0  | 9.5  | 9.5  | 220                            | 120   | 123   | 128   | 176   | 240   | 295   | 341   | 445   | 183   | 151   | 27.37                      | 14.34                                  |  |
| Iowa... | 11.7                       | 11.0 | 11.0 | 16.0 | 12.0 | 8.7  | 208                            | 124   | 123   | 120   | 150   | 215   | 275   | 320   | 420   | 180   | 153   | 35.15                      | 13.31                                  |  |
| N. Dak. | 5.6                        | 3.9  | 7.9  | 4.6  | 5.3  | 6.4  | 220                            | 114   | 121   | 128   | 178   | 252   | 300   | 345   | 441   | 178   | 143   | 18.86                      | 9.15                                   |  |
| S. Dak. | 8.0                        | 7.0  | 9.5  | 7.0  | 10.0 | 6.5  | 212                            | 113   | 120   | 123   | 167   | 247   | 299   | 325   | 425   | 165   | 139   | 24.21                      | 9.04                                   |  |
| Nebr... | 7.4                        | 5.5  | 9.5  | 5.0  | 9.0  | 8.0  | 202                            | 128   | 110   | 119   | 147   | 230   | 250   | 330   | 400   | 155   | 150   | 19.49                      | 12.00                                  |  |
| Kans... | 6.4                        | 7.0  | 5.0  | 6.3  | 6.9  | 6.7  | 206                            | 130   | 116   | 125   | 145   | 234   | 260   | 330   | 380   | 180   | 135   | 17.35                      | 9.04                                   |  |
| Mont... | 3.0                        | 3.0  | 3.0  | 1.3  | 2.6  | 5.0  | 215                            | 112   | 115   | 120   | 170   | 248   | 295   | 338   | 440   | 175   | 140   | 10.66                      | 7.00                                   |  |
| Wyo...  | 6.7                        | 6.5  | 9.0  | 4.0  | 8.2  | 5.7  | 223                            | ..... | ..... | ..... | 145   | 225   | 261   | 325   | 350   | 185   | 118   | 17.41                      | 6.73                                   |  |
| U. S.   | 5.9                        | 4.6  | 7.0  | 4.8  | 6.1  | 7.0  | 218                            | 114.7 | 119.9 | 126.0 | 174.0 | 248.6 | 296.6 | 340.1 | 438.3 | 176.7 | 144.6 | 18.72                      | 10.07                                  |  |

<sup>1</sup>Based upon farm value Dec. 1.

TABLE 97.—*Flaxseed: Farm price, cents per bushel on first of each month, 1908-1921.*

| Year.               | January. | February. | March. | April. | May.  | June. | July. | August. | September. | October. | November. | December. | Average. |
|---------------------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|----------|
| 1908.....           | 99.3     | 101.0     | 102.9  | 103.0  | 104.8 | 109.2 | 108.1 | 107.4   | 109.6      | 107.0    | 108.3     | 118.4     | 108.7    |
| 1909.....           | 123.2    | 126.8     | 141.3  | 145.6  | 148.7 | 153.4 | 153.2 | 137.0   | 123.1      | 122.8    | 139.8     | 152.9     | 138.5    |
| 1910.....           | 171.2    | 192.9     | 193.1  | 193.9  | 200.5 | 195.5 | 183.5 | 209.7   | 220.0      | 234.3    | 229.4     | 231.7     | 217.9    |
| 1911.....           | 221.1    | 238.9     | 240.7  | 234.6  | 241.9 | 225.0 | 205.6 | 199.2   | 203.6      | 205.0    | 210.6     | 182.1     | 207.8    |
| 1912.....           | 187.1    | 190.8     | 183.9  | 191.3  | 181.0 | 205.0 | 198.4 | 175.2   | 162.6      | 147.7    | 133.4     | 114.7     | 143.6    |
| 1913.....           | 108.2    | 109.3     | 119.0  | 113.6  | 114.3 | 115.8 | 113.4 | 118.6   | 127.8      | 122.6    | 118.7     | 119.9     | 117.7    |
| 1914.....           | 124.2    | 127.8     | 132.5  | 132.8  | 134.7 | 136.8 | 136.0 | 150.7   | 139.3      | 127.4    | 118.7     | 126.0     | 125.6    |
| 1915.....           | 134.8    | 133.7     | 157.9  | 167.7  | 169.6 | 169.5 | 152.5 | 144.6   | 143.5      | 148.1    | 162.9     | 174.0     | 159.5    |
| 1916.....           | 135.9    | 210.9     | 202.5  | 202.1  | 191.8 | 178.5 | 163.2 | 178.1   | 190.2      | 199.2    | 234.7     | 248.6     | 218.4    |
| 1917.....           | 250.7    | 253.7     | 253.1  | 256.1  | 300.6 | 298.8 | 278.0 | 271.6   | 302.8      | 308.5    | 295.9     | 296.6     | 288.7    |
| 1918.....           | 310.8    | 320.7     | 349.8  | 370.7  | 373.3 | 363.6 | 349.3 | 410.5   | 381.2      | 380.9    | 333.8     | 340.1     | 345.5    |
| 1919.....           | 327.7    | 310.1     | 327.4  | 348.7  | 361.4 | 389.3 | 444.1 | 540.6   | 517.5      | 438.2    | 382.3     | 438.3     | 393.5    |
| 1920.....           | 433.6    | 456.5     | 472.7  | 455.7  | 443.2 | 421.1 | 390.6 | 303.7   | 290.3      | 270.7    | 240.1     | 176.7     | 289.2    |
| 1921.....           | 163.7    | 165.3     | 150.4  | 142.6  | 125.7 | 145.7 | 145.8 | 162.1   | 164.8      | 162.9    | 145.0     | 144.6     | 150.5    |
| Average, 1912-1921. | 222.5    | 230.0     | 234.9  | 240.0  | 240.1 | 242.2 | 234.0 | 245.6   | 242.0      | 231.5    | 216.6     | 218.0     | 221.2    |



## FLAX—Continued.

TABLE 98.—Flaxseed: Monthly marketings by farmers, 1916-1921.

| Month.         | Estimated amount sold monthly by farmers of United States (millions of bushels). |         |         |         |         |             | Per cent of year's sales. |         |         |         |         |             |
|----------------|--|---------|---------|---------|---------|-------------|---------------------------|---------|---------|---------|---------|-------------|
|                | 1916-17  | 1917-18 | 1918-19 | 1919-20 | 1920-21 | 5-yr. aver. | 1916-17                   | 1917-18 | 1918-19 | 1919-20 | 1920-21 | 5-yr. aver. |
| July.....      | 0.2  | 0.1     | 0.2     | 0.3     | 0.2     | 0.2         | 1.2                       | 1.8     | 1.8     | 3.6     | 2.1     | 2.1         |
| August.....    | .3   | .3      | .4      | .6      | .5      | .4          | 2.2                       | 3.6     | 2.9     | 8.0     | 4.7     | 4.3         |
| September..... | 1.7  | 1.6     | 1.8     | 1.4     | 2.4     | 1.8         | 12.7                      | 21.5    | 14.8    | 20.6    | 23.6    | 18.6        |
| October.....   | 4.7  | 2.1     | 2.7     | 1.6     | 2.9     | 2.8         | 35.6                      | 28.1    | 21.5    | 22.2    | 28.6    | 27.2        |
| November.....  | 3.2  | 1.3     | 1.9     | .8      | 1.3     | 1.7         | 24.3                      | 17.6    | 15.0    | 11.1    | 13.0    | 16.2        |
| December.....  | 1.6  | .6      | 1.4     | .8      | .6      | .9          | 11.4                      | 7.6     | 10.9    | 7.4     | 6.2     | 8.7         |
| January.....   | .6   | .3      | .6      | .3      | .5      | .6          | 4.4                       | 4.7     | 8.2     | 3.0     | 5.0     | 4.9         |
| February.....  | .2   | .3      | .6      | .4      | .3      | .4          | 1.7                       | 4.0     | 4.4     | 6.3     | 3.3     | 3.9         |
| March.....     | .3   | .4      | .7      | .2      | .3      | .4          | 2.0                       | 4.8     | 5.8     | 3.1     | 3.1     | 3.8         |
| April.....     | .1   | .1      | .5      | .2      | .2      | .2          | .9                        | 1.8     | 4.3     | 3.1     | 2.1     | 2.4         |
| May.....       | .2   | .1      | .6      | .2      | .3      | .3          | 1.6                       | 1.6     | 5.0     | 2.6     | 3.4     | 2.8         |
| June.....      | .3   | .2      | 1.0     | .5      | .5      | .5          | 2.6                       | 2.9     | 8.4     | 7.0     | 4.9     | 5.1         |
| Season.....    | 13.3   | 7.4     | 12.4    | 7.0     | 10.0    | 10.1        | 100.0                     | 100.0   | 100.0   | 100.0   | 100.0   | 100.0       |

TABLE 99.—Flaxseed: Extent and causes of yearly crop losses, 1909-1920.

| Year.        | Deficient moisture. | Excessive moisture. | Floods.          | Frost and freeze. | Hail.  | Hot winds. | Storms.          | Total climatic. | Plant disease. | Insect pests. | Animal pests.    | Defective seed.  | Total. |
|--------------|---------------------|---------------------|------------------|-------------------|--------|------------|------------------|-----------------|----------------|---------------|------------------|------------------|--------|
|              | P. ct.              | P. ct.              | P. ct.           | P. ct.            | P. ct. | P. ct.     | P. ct.           | P. ct.          | P. ct.         | P. ct.        | P. ct.           | P. ct.           | P. ct. |
| 1920.....    | 23.2                | 1.2                 | 0.3              | 0.6               | 1.7    | 4.2        | 0.2              | 31.7            | 4.4            | 3.7           | ( <sup>1</sup> ) | 0.1              | 41.4   |
| 1919.....    | 38.0                | .7                  | .1               | .5                | 2.0    | 4.1        | ( <sup>1</sup> ) | 45.5            | 3.7            | 10.6          | 0.1              | ( <sup>1</sup> ) | 60.2   |
| 1918.....    | 26.2                | .2                  | .1               | 3.3               | 2.3    | 2.5        | .2               | 34.8            | 1.0            | 2.6           | ( <sup>1</sup> ) | .1               | 39.3   |
| 1917.....    | 51.3                | .3                  | ( <sup>1</sup> ) | 2.9               | 1.2    | 3.9        | ( <sup>1</sup> ) | 59.3            | 1.2            | 1.2           | ( <sup>1</sup> ) | .1               | 62.3   |
| 1916.....    | 3.3                 | 2.3                 | .3               | 1.4               | 1.7    | 2.8        | .3               | 12.4            | 3.9            | .1            | ( <sup>1</sup> ) | .1               | 17.2   |
| 1915.....    | 2.1                 | 2.0                 | .3               | 8.5               | 2.1    | .4         | .2               | 16.1            | 2.6            | .1            | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 20.0   |
| 1914.....    | 11.4                | 1.7                 | .2               | 2.0               | 1.9    | 6.6        | .3               | 24.1            | 2.2            | .5            | .2               | .4               | 29.1   |
| 1913.....    | 24.3                | .7                  | .1               | 1.0               | 1.7    | 2.2        | .2               | 30.6            | 1.6            | .2            | .....            | .4               | 34.5   |
| 1912.....    | 5.1                 | 2.9                 | .2               | 5.9               | 2.8    | 1.1        | .8               | 19.0            | 3.7            | .4            | .4               | 1.4              | 26.6   |
| 1911.....    | 16.4                | 1.1                 | .....            | 8.4               | .9     | 2.8        | .1               | 30.5            | 2.2            | 1.7           | ( <sup>1</sup> ) | .2               | 36.3   |
| 1910.....    | 49.4                | ( <sup>1</sup> )    | .....            | 2.5               | .9     | 6.2        | .1               | 59.3            | 1.3            | 1.7           | ( <sup>1</sup> ) | .1               | 63.1   |
| Average..... | 22.8                | 1.2                 | .2               | 3.4               | 1.7    | 3.2        | .2               | 33.0            | 2.5            | 2.1           | .1               | .3               | 39.1   |

<sup>1</sup> Less than 0.05 per cent.

FLAX—Continued.

TABLE 100.—*Flaxseed: Monthly and yearly average price per bushel, Minneapolis, 1910-11 to 1921-22.*<sup>1</sup>

| Crop year.      | Sept.  | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Average. |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910-11.....    | \$2.66 | \$2.62 | \$2.61 | \$2.42 | \$2.60 | \$2.68 | \$2.60 | \$2.56 | \$2.47 | \$2.24 | \$2.10 | \$2.34 | \$2.49   |
| 1911-12.....    | 2.47   | 2.35   | 2.04   | 2.06   | 2.15   | 2.06   | 2.06   | 2.15   | 2.23   | 2.25   | 1.97   | 1.86   | 2.14     |
| 1912-13.....    | 1.76   | 1.60   | 1.35   | 1.25   | 1.29   | 1.34   | 1.26   | 1.29   | 1.30   | 1.31   | 1.38   | 1.47   | 1.38     |
| 1913-14.....    | 1.45   | 1.38   | 1.35   | 1.44   | 1.49   | 1.53   | 1.58   | 1.54   | 1.56   | 1.59   | 1.68   | 1.64   | 1.52     |
| 1914-15.....    | 1.51   | 1.33   | 1.45   | 1.54   | 1.83   | 1.86   | 1.91   | 1.93   | 1.95   | 1.76   | 1.67   | 1.67   | 1.70     |
| 1915-16.....    | 1.70   | 1.86   | 1.99   | 2.07   | 2.31   | 2.32   | 2.27   | 2.13   | 1.96   | 1.80   | 1.96   | 2.13   | 2.04     |
| 1916-17.....    | 2.11   | 2.54   | 2.78   | 2.84   | 2.89   | 2.81   | 2.90   | 3.18   | 3.33   | 3.11   | 3.01   | 3.46   | 2.91     |
| 1917-18.....    | 3.38   | 3.16   | 3.29   | 3.40   | 3.60   | 3.74   | 4.08   | 4.09   | 3.93   | 3.86   | 4.40   | 4.39   | 3.73     |
| 1918-19.....    | 4.09   | 3.59   | 3.77   | 3.54   | 3.41   | 3.45   | 3.75   | 3.88   | 4.12   | 4.86   | 5.94   | 5.87   | 4.19     |
| 1919-20.....    | 4.92   | 4.32   | 4.83   | 4.99   | 5.12   | 5.09   | 5.02   | 4.68   | 4.53   | 3.92   | 3.48   | 3.28   | 4.52     |
| 1920-21.....    | 3.23   | 2.83   | 2.27   | 2.06   | 1.96   | 1.82   | 1.78   | 1.58   | 1.84   | 1.86   | 1.89   | 2.01   | 2.09     |
| 1921-22.....    | 2.03   | 1.81   | 1.79   | 1.81   |        |        |        |        |        |        |        |        |          |
| 11-year average | 2.66   | 2.51   | 2.52   | 2.51   | 2.60   | 2.61   | 2.66   | 2.64   | 2.66   | 2.60   | 2.08   | 2.74   | 2.61     |

<sup>1</sup> From Annual Reports of Minneapolis Chamber of Commerce and Daily Market Record.

TABLE 101.—*Flaxseed: Monthly and yearly average price per gallon of linseed oil, New York, 1910-11 to 1921-22.*<sup>1</sup>

| Crop year.      | Sept.  | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Average. |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910-11.....    | \$0.90 | \$0.90 | \$0.95 | \$0.95 | \$0.95 | \$0.96 | \$0.96 | \$0.91 | \$0.91 | \$0.89 | \$0.87 | \$0.80 | \$0.91   |
| 1911-12.....    | .87    | .88    | .84    | .71    | .74    | .71    | .70    | .73    | .78    | .78    | .77    | .66    | .76      |
| 1912-13.....    | .66    | .63    | .56    | .43    | .42    | .46    | .45    | .44    | .46    | .45    | .47    | .49    | .49      |
| 1913-14.....    | .50    | .47    | .46    | .48    | .48    | .48    | .50    | .51    | .50    | .50    | .52    | .59    | .50      |
| 1914-15.....    | .57    | .49    | .44    | .45    | .48    | .56    | .55    | .58    | .62    | .63    | .54    | .50    | .53      |
| 1915-16.....    | .52    | .55    | .60    | .61    | .66    | .72    | .77    | .76    | .75    | .67    | .63    | .71    | .68      |
| 1916-17.....    | .70    | .82    | .90    | .82    | .94    | .95    | .94    | 1.07   | 1.21   | 1.21   | 1.12   | 1.18   | 1.00     |
| 1917-18.....    | 1.25   | 1.18   | 1.15   | 1.21   | 1.29   | 1.29   | 1.41   | 1.57   | 1.57   | 1.57   | 1.64   | 1.88   | 1.42     |
| 1918-19.....    | 1.90   | 1.83   | 1.55   | 1.58   | 1.50   | 1.45   | 1.48   | 1.54   | 1.61   | 1.81   | 2.10   | 2.22   | 1.71     |
| 1919-20.....    | 2.04   | 1.79   | 1.75   | 1.82   | 1.77   | 1.77   | 1.80   | 1.83   | 1.69   | 1.65   | 1.52   | 1.41   | 1.74     |
| 1920-21.....    | 1.22   | 1.20   | .98    | .82    | .78    | .66    | .66    | .61    | .70    | .75    | .75    | .74    | .82      |
| 1921-22.....    | .74    | .68    | .67    | .67    |        |        |        |        |        |        |        |        |          |
| 11-year average | 1.01   | .98    | .93    | .91    | .91    | .91    | .93    | .96    | .98    | .99    | .99    | 1.02   | .96      |

<sup>1</sup> Figures for 1910-1915 from Monthly Labor Review; 1916-1918 from War Industries Board Price Bulletin; 1919-1921 from Oil, Paint, and Drug Reporter.

## FLAX—Continued.

TABLE 102.—*Flaxseed: Monthly and yearly receipts at Minneapolis, 1910-11 to 1921-22.*<sup>1</sup>

[In thousands of bushels; i. e., 000 omitted.]

| Crop year.      | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Total. |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1910-11.....    | 854   | 1,530 | 1,292 | 535   | 338   | 300   | 232   | 112   | 118   | 122   | 133   | 191   | 5,757  |
| 1911-12.....    | 563   | 1,212 | 1,570 | 1,716 | 531   | 459   | 397   | 468   | 571   | 440   | 457   | 160   | 8,574  |
| 1912-13.....    | 700   | 1,057 | 1,520 | 2,245 | 1,450 | 1,246 | 1,057 | 742   | 518   | 514   | 432   | 281   | 12,362 |
| 1913-14.....    | 756   | 1,688 | 1,505 | 1,131 | 711   | 478   | 592   | 270   | 139   | 165   | 233   | 117   | 7,783  |
| 1914-15.....    | 901   | 1,890 | 1,247 | 1,016 | 599   | 443   | 384   | 142   | 77    | 145   | 239   | 115   | 7,199  |
| 1915-16.....    | 347   | 1,038 | 1,506 | 1,113 | 319   | 399   | 810   | 486   | 440   | 363   | 441   | 199   | 7,461  |
| 1916-17.....    | 316   | 2,380 | 1,694 | 1,045 | 544   | 442   | 441   | 384   | 263   | 565   | 325   | 92    | 8,491  |
| 1917-18.....    | 265   | 980   | 1,112 | 614   | 533   | 553   | 527   | 283   | 349   | 648   | 208   | 94    | 6,166  |
| 1918-19.....    | 536   | 915   | 857   | 788   | 558   | 473   | 829   | 439   | 436   | 942   | 642   | 193   | 7,611  |
| 1919-20.....    | 753   | 570   | 568   | 492   | 344   | 368   | 409   | 159   | 295   | 522   | 554   | 297   | 5,331  |
| 1921-22.....    | 580   | 1,444 | 861   | 699   | 298   | 269   | 364   | 434   | 578   | 572   | 338   | 289   | 6,726  |
| 1922-23.....    | 500   | 1,144 | 375   | 354   | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  |
| 11-year average | 597   | 1,391 | 1,248 | 1,036 | 506   | 494   | 549   | 356   | 344   | 454   | 367   | 185   | 7,587  |

<sup>1</sup> Compiled from Minneapolis Chamber of Commerce Reports and Daily Market Record.TABLE 103.—*Flaxseed: International trade, calendar years 1911-1920.*

[See "General note," Table 17.]

| Year.     | Argentina.       |                | Australia.       |                  | Austria-Hungary. |                | Belgium.       |                  |
|-----------|------------------|----------------|------------------|------------------|------------------|----------------|----------------|------------------|
|           | Imports.         | Exports.       | Imports.         | Exports.         | Imports.         | Exports.       | Imports.       | Exports.         |
|           | 1,000 bushels.   | 1,000 bushels. | 1,000 bushels.   | 1,000 bushels.   | 1,000 bushels.   | 1,000 bushels. | 1,000 bushels. | 1,000 bushels.   |
| 1911..... | ( <sup>1</sup> ) | 15,369         | 58               | ( <sup>1</sup> ) | 1,423            | 38             | 8,958          | 6,031            |
| 1912..... | 1                | 20,290         | 111              | ( <sup>1</sup> ) | 1,788            | 48             | 8,780          | 5,880            |
| 1913..... | ( <sup>1</sup> ) | 40,027         | 139              | ( <sup>1</sup> ) | 2,526            | 36             | 10,200         | 5,980            |
| 1914..... | ( <sup>1</sup> ) | 33,132         | 180              | ( <sup>1</sup> ) | .....            | .....          | .....          | .....            |
| 1915..... | 3                | 38,627         | 350              | ( <sup>1</sup> ) | .....            | .....          | .....          | .....            |
| 1916..... | .....            | 25,192         | 395              | ( <sup>1</sup> ) | .....            | .....          | .....          | .....            |
| 1917..... | .....            | 5,563          | 617              | ( <sup>1</sup> ) | .....            | .....          | .....          | .....            |
| 1918..... | .....            | 15,408         | 803              | ( <sup>1</sup> ) | .....            | .....          | .....          | .....            |
| 1919..... | ( <sup>1</sup> ) | 33,677         | 369              | ( <sup>1</sup> ) | .....            | .....          | 1,009          | 38               |
| 1920..... | .....            | 39,952         | .....            | .....            | .....            | .....          | 827            | 111              |
|           | British India.   |                | Canada.          |                  | China.           |                | Finland.       |                  |
| 1911..... | .....            | .....          | 256              | 804              | .....            | .....          | 117            | ( <sup>1</sup> ) |
| 1912..... | 353              | 14,133         | 6                | 8,181            | .....            | 900            | 105            | ( <sup>1</sup> ) |
| 1913..... | 294              | 14,685         | 5                | 22,949           | .....            | 396            | 107            | ( <sup>1</sup> ) |
| 1914..... | 342              | 14,067         | ( <sup>1</sup> ) | 7,953            | .....            | 444            | 124            | .....            |
| 1915..... | 155              | 7,188          | 77               | 2,021            | .....            | 364            | 258            | .....            |
| 1916..... | 385              | 15,559         | 1                | 4,825            | .....            | 482            | 224            | .....            |
| 1917..... | 314              | 7,439          | 2                | 6,275            | .....            | 333            | 101            | .....            |
| 1918..... | 379              | 8,867          | 13               | 2,088            | 63               | 210            | 30             | .....            |
| 1919..... | 243              | 13,341         | 27               | 1,173            | 27               | 555            | 85             | .....            |
| 1920..... | 280              | 7,839          | 617              | 1,519            | 3                | 242            | 105            | .....            |

<sup>1</sup> Less than 500 bushels.<sup>2</sup> Includes hempseed.

## FLAX—Continued.

TABLE 103.—Flaxseed: International trade, calendar years 1911–1920—Continued.

| Year.             | France.        |                | Germany.       |                  | Italy.         |                 | Japan.         |                |
|-------------------|----------------|----------------|----------------|------------------|----------------|-----------------|----------------|----------------|
|                   | Imports.       | Exports.       | Imports.       | Exports.         | Imports.       | Exports.        | Imports.       | Exports.       |
|                   | 1,000 bushels. | 1,000 bushels. | 1,000 bushels. | 1,000 bushels.   | 1,000 bushels. | 1,000 bushels.  | 1,000 bushels. | 1,000 bushels. |
| 1911.....         | 4,147          | 109            | 10,879         | 250              | 1,619          | 1               | 27             | 27             |
| 1912.....         | 5,418          | 31             | 12,995         | 213              | 1,688          | (1)             | .....          | .....          |
| 1913.....         | 9,346          | 41             | 22,063         | 167              | 1,788          | 2               | .....          | .....          |
| 1914.....         | 4,861          | 78             | .....          | .....            | 1,275          | (1)             | .....          | .....          |
| 1915.....         | 1,322          | 73             | .....          | .....            | 1,509          | (1)             | 77             | .....          |
| 1916.....         | 2,471          | 65             | .....          | .....            | 1,055          | (1)             | 272            | 90             |
| 1917.....         | 1,886          | 49             | .....          | .....            | 888            | .....           | 149            | 203            |
| 1918.....         | 1,028          | 5              | .....          | .....            | 141            | (1)             | 262            | 78             |
| 1919.....         | 4,001          | 22             | .....          | .....            | 519            | (1)             | 347            | 344            |
| 1920.....         | 1,284          | 67             | 2,089          | 13               | 871            | (1)             | 114            | 74             |
|                   |                |                |                |                  |                |                 |                |                |
| Morocco (French). |                | Netherlands.   |                | Norway.          |                | Rumania.        |                |                |
| 1911.....         | .....          | 414            | 6,738          | 1,601            | 361            | .....           | 38             | 143            |
| 1912.....         | .....          | 530            | 8,225          | 2,373            | 395            | .....           | 5              | 98             |
| 1913.....         | .....          | 69             | 11,261         | 3,400            | 579            | .....           | 15             | 119            |
| 1914.....         | .....          | 419            | 10,304         | 2,731            | 470            | .....           | 7              | 142            |
| 1915.....         | .....          | 281            | 13,414         | 149              | 519            | .....           | 78             | (1)            |
| 1916.....         | .....          | 82             | 6,814          | 136              | 492            | .....           | .....          | .....          |
| 1917.....         | .....          | 169            | 777            | 237              | 239            | .....           | .....          | .....          |
| 1918.....         | .....          | 153            | 3              | 178              | (1)            | .....           | .....          | .....          |
| 1919.....         | .....          | .....          | 3,808          | 90               | 351            | .....           | 6              | .....          |
| 1920.....         | .....          | 706            | 3,826          | 179              | 332            | .....           | .....          | .....          |
|                   |                |                |                |                  |                |                 |                |                |
| Russia.           |                | Sweden.        |                | Tunis.           |                | United Kingdom. |                |                |
| 1911.....         | 60             | 6,340          | 791            | (1)              | (1)            | 25              | 10,518         | .....          |
| 1912.....         | 92             | 6,588          | 805            | (1)              | (1)            | 23              | 11,246         | .....          |
| 1913.....         | 87             | 4,289          | 1,137          | 22               | (1)            | 70              | 25,961         | .....          |
| 1914.....         | 48             | 3,641          | 981            | 31               | (1)            | 18              | 19,055         | .....          |
| 1915.....         | 39             | 428            | 1,166          | (1)              | (1)            | 51              | 16,287         | .....          |
| 1916.....         | .....          | 820            | 1,011          | .....            | (1)            | 12              | 20,023         | .....          |
| 1917.....         | .....          | .....          | 9              | .....            | (1)            | 7               | 8,026          | .....          |
| 1918.....         | .....          | .....          | 67             | .....            | (1)            | 41              | 10,476         | .....          |
| 1919.....         | .....          | .....          | 695            | (1)              | 3              | 38              | 21,977         | .....          |
| 1920.....         | .....          | .....          | 1,085          | .....            | 1              | 36              | 15,520         | .....          |
|                   |                |                |                |                  |                |                 |                |                |
| United States.    |                | Uruguay.       |                | Other countries. |                | Total.          |                |                |
| 1911.....         | 7,480          | 1              | .....          | 520              | 379            | 127             | 53,852         | 32,893         |
| 1912.....         | 7,833          | 20             | .....          | 658              | 513            | 208             | 60,350         | 60,174         |
| 1913.....         | 6,580          | 283            | .....          | 1,804            | 832            | 81              | 92,920         | 94,420         |
| 1914.....         | 9,247          | 24             | .....          | 1,069            | 976            | 48              | 47,870         | 63,797         |
| 1915.....         | 14,697         | 5              | .....          | 564              | 1,387          | 24              | 51,338         | 49,775         |
| 1916.....         | 13,098         | 2              | .....          | 322              | 1,530          | 10              | 47,721         | 47,608         |
| 1917.....         | 9,394          | 5              | .....          | 14               | 269            | 34              | 22,694         | 20,323         |
| 1918.....         | 12,974         | 26             | .....          | 105              | 64             | 138             | 26,303         | 27,295         |
| 1919.....         | 14,036         | 17             | .....          | 541              | 733            | 90              | 48,238         | 49,928         |
| 1920.....         | 24,641         | 16             | .....          | 784              | 1,064          | 58              | 52,659         | 51,591         |

1 Less than 500 bushels.

## RICE.

TABLE 104.—Rice: Area and production in undermentioned countries, 1909-1920.

| Country.  | Area.                                  |                          |                          |                          | Production.                        |                               |                               |                               |
|---|--|--------------------------|--------------------------|--------------------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|
|   | Average<br>1909-<br>1913. <sup>1</sup> | 1918                     | 1919                     | 1920                     | Average<br>1909-1913. <sup>1</sup> | 1918                          | 1919                          | 1920                          |
| <b>NORTH AMERICA.</b>                               |  |                          |                          |                          |                                    |                               |                               |                               |
| United States.....                                  | 1,000<br>acres.<br>749                 | 1,000<br>acres.<br>1,119 | 1,000<br>acres.<br>1,083 | 1,000<br>acres.<br>1,336 | 1,000<br>pounds.<br>681,166        | 1,000<br>pounds.<br>1,072,389 | 1,000<br>pounds.<br>1,166,260 | 1,000<br>pounds.<br>1,446,278 |
| Hawaii.....   | 29                                     |                          | 6                        |                          | 25,820                             |                               | 18,254                        |                               |
| Porto Rico.....                                     | 16                                     |                          |                          |                          | 4,298                              |                               |                               |                               |
| Central America:                                    |  |                          |                          |                          |                                    |                               |                               |                               |
| Guatemala.....                                      |  | 43                       | 14                       | 6                        | 2,680                              | 16,997                        | 5,185                         | 2,235                         |
| Costa Rica.....                                     | 7                                      |                          | 1                        |                          |                                    |                               |                               |                               |
| Honduras.....                                       |  |                          |                          |                          | 8,100                              |                               |                               |                               |
| Mexico.....   | 162                                    | 180                      |                          |                          | 164,299                            | 24,787                        |                               |                               |
| <b>SOUTH AMERICA.</b>                               |  |                          |                          |                          |                                    |                               |                               |                               |
| Argentina.....                                      | 20                                     |                          |                          |                          | 24,057                             |                               |                               |                               |
| Brazil (Sao Paulo).....                             | 228                                    |                          |                          |                          | 99,514                             | 242,110                       | 295,254                       |                               |
| British Guiana.....                                 | 38                                     |                          | 61                       | 54                       | 69,078                             | 44,800                        | 103,222                       | 55,555                        |
| Dutch Guiana.....                                   |  |                          |                          |                          | 2,754                              | 17,649                        |                               |                               |
| Peru.....   | 138                                    |                          |                          |                          | 100,976                            |                               |                               |                               |
| <b>EUROPE.</b>                                      |  |                          |                          |                          |                                    |                               |                               |                               |
| Bulgaria.....                                       | 7                                      | 14                       | 4                        | 6                        | 7,767                              | 7,567                         | 5,474                         | 5,642                         |
| France.....   | 1                                      |                          |                          |                          | 2,017                              |                               |                               |                               |
| Italy.....  | 361                                    | 342                      | 325                      | 276                      | 646,470                            | 712,412                       | 662,340                       | 614,030                       |
| Russia (Northern Cauca-<br>sia) <sup>4</sup>        | 2                                      |                          |                          |                          | 1,049                              |                               |                               |                               |
| Spain.....  | 95                                     | 111                      | 112                      | 120                      | 297,468                            | 282,419                       | 411,816                       | 393,759                       |
| <b>ASIA.</b>  |  |                          |                          |                          |                                    |                               |                               |                               |
| India:  |  |                          |                          |                          |                                    |                               |                               |                               |
| British India.....                                  | 70,591                                 | 79,508                   | 79,426                   | 78,023                   | 72,949,786                         | 55,218,240                    | 71,612,800                    | 62,792,920                    |
| Native States.....                                  | 2,498                                  |                          |                          |                          | 2,634,720                          |                               |                               |                               |
| Ceylon.....   | 706                                    | 679                      |                          |                          | 343,614                            |                               |                               |                               |
| Federated Malay States.....                         | 125                                    |                          |                          |                          | 80,398                             |                               |                               |                               |
| Japanese Empire:                                    |  |                          |                          |                          |                                    |                               |                               |                               |
| Japan.....  | 7,357                                  | 7,580                    | 7,497                    | 7,661                    | 14,008,517                         | 17,183,992                    | 19,106,369                    | 19,849,470                    |
| Formosa.....  | 1,198                                  |                          | 1,227                    | 1,213                    | 1,186,174                          |                               | 1,185,154                     | 1,544,810                     |
| Chosen.....   | 2,416                                  |                          |                          |                          | 2,455,522                          | 3,376,112                     | 2,915,060                     |                               |
| Java and Madura.....                                | 5,021                                  | 7,128                    | 8,465                    | 8,060                    | 7,849,417                          | 8,464,575                     | 7,051,451                     | 6,490,284                     |
| Indo-China.....                                     |  |                          | 10,173                   | 11,762                   |                                    | 6,301,999                     | 4,637,825                     | 6,283,361                     |
| Philippine Islands.....                             | 2,238                                  | 3,381                    | 3,418                    | 3,669                    | 1,123,805                          | 2,209,585                     | 1,976,821                     | 2,126,642                     |
| Russia, Transcaucasia and<br>Turkistan <sup>4</sup> | 614                                    |                          |                          |                          | 378,401                            |                               |                               |                               |
| Straits Settlements.....                            | 92                                     |                          |                          |                          | 123,204                            |                               |                               |                               |
| Siam.....   | 5,286                                  |                          |                          |                          | 6,510,985                          |                               | 5,445,457                     | 3,538,216                     |
| <b>AFRICA.</b>                                      |  |                          |                          |                          |                                    |                               |                               |                               |
| Egypt (Lower).....                                  | 241                                    | 385                      | 150                      | 165                      | 552,833                            | 691,965                       | 606,870                       | 634,444                       |
| Madagascar.....                                     |  |                          |                          |                          | 953,000                            | 1,545,000                     |                               |                               |
| Nyasaland.....                                      |  |                          |                          |                          | 2,212                              |                               |                               |                               |
| <b>OCEANIA.</b>                                     |  |                          |                          |                          |                                    |                               |                               |                               |
| Australia.....                                      |  |                          |                          |                          | 75                                 |                               |                               |                               |
| Fiji.....   | 12                                     |                          |                          |                          | 5,916                              |                               |                               |                               |

<sup>1</sup> Five-year average except in a few cases where statistics were unavailable.<sup>2</sup> Census.<sup>3</sup> Unofficial.<sup>4</sup> Old boundaries.

## RICE—Continued.

TABLE 105.—Rice (cleaned): World production so far as reported, 1900-1920.

| Year.     | Production.     | Year.     | Production.     | Year.     | Production.     |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|           | <i>Pounds.</i>  |           | <i>Pounds.</i>  |           | <i>Pounds.</i>  |
| 1900..... | 100,400,000,000 | 1907..... | 100,300,000,000 | 1914..... | 103,000,000,000 |
| 1901..... | 94,400,000,000  | 1908..... | 102,900,000,000 | 1915..... | 114,500,000,000 |
| 1902..... | 101,600,000,000 | 1909..... | 127,700,000,000 | 1916..... | 112,300,000,000 |
| 1903..... | 101,800,000,000 | 1910..... | 126,100,000,000 | 1917..... | 122,000,000,000 |
| 1904..... | 110,700,000,000 | 1911..... | 102,100,000,000 | 1918..... | 97,400,000,000  |
| 1905..... | 102,400,000,000 | 1912..... | 97,300,000,000  | 1919..... | 117,200,000,000 |
| 1906..... | 105,800,000,000 | 1913..... | 100,700,000,000 | 1920..... | 105,800,000,000 |

TABLE 106.—Rice: Acreage, production, value, exports, etc., in the United States, 1904-1921.

[See headnote of Table 4.]

| Year.                   | Acreage.      | Average yield per acre. | Production.     | Average farm price per bushel Dec. 1. | Farm value Dec. 1. | Domestic exports, year beginning July 1. <sup>1</sup> | Net imports, year beginning July 1. <sup>1</sup> |
|-------------------------|---------------|-------------------------|-----------------|---------------------------------------|--------------------|---|--|
|                         | <i>Acres.</i> | <i>Bushels.</i>         | <i>Bushels.</i> | <i>Cents.</i>                         | <i>Dollars.</i>    | <i>Bushels.</i>                                       | <i>Bushels.</i>                                  |
| 1904.....               | 662,000       | 31.9                    | 21,066,000      | 65.8                                  | 13,892,000         | 5,964,814   | 3,501,387  |
| 1905.....               | 482,000       | 28.2                    | 13,607,000      | 95.2                                  | 12,950,000         | 3,612,289   | 5,583,750  |
| 1906.....               | 575,000       | 31.1                    | 17,855,000      | 90.3                                  | 16,121,600         | 3,790,080   | 7,264,859  |
| 1907.....               | 627,000       | 29.9                    | 18,738,000      | 85.8                                  | 16,081,000         | 3,083,788   | 7,333,910  |
| 1908.....               | 655,000       | 33.4                    | 21,890,000      | 81.2                                  | 17,771,900         | 3,406,070   | 7,760,164  |
| 1909.....               | 610,000       | 33.6                    | 20,607,000      | 79.5                                  | 16,392,000         | 4,487,287   | 7,820,643  |
| 1910 <sup>2</sup> ..... | 723,000       | 33.9                    | 24,510,000      | 67.8                                  | 16,624,000         | 5,134,355   | 7,232,966  |
| 1911.....               | 696,000       | 32.9                    | 22,934,000      | 79.7                                  | 18,274,000         | 5,824,598   | 6,467,505  |
| 1912.....               | 723,000       | 34.7                    | 25,064,000      | 93.5                                  | 23,428,000         | 5,672,996   | 7,539,206  |
| 1913.....               | 827,000       | 31.1                    | 25,744,000      | 85.8                                  | 22,090,000         | 5,871,289   | 9,806,684  |
| 1914.....               | 694,000       | 34.1                    | 23,649,000      | 92.4                                  | 21,849,000         | 7,334,389   | 7,848,181  |
| 1915.....               | 803,000       | 36.1                    | 28,947,000      | 90.6                                  | 26,212,000         | 9,806,099   | 6,931,061  |
| 1916.....               | 889,000       | 47.0                    | 40,861,000      | 88.9                                  | 36,311,000         | 12,315,486  | 6,180,934  |
| 1917.....               | 931,000       | 35.4                    | 34,739,000      | 189.6                                 | 65,879,000         | 11,886,265  | 13,096,243                                       |
| 1918.....               | 1,119,000     | 34.5                    | 38,606,000      | 191.8                                 | 74,042,000         | 12,892,196  | 5,309,014  |
| 1919 <sup>3</sup> ..... | 1,063,000     | 39.5                    | 41,985,000      | 266.6                                 | 111,913,000        | 22,899,774  | 3,001,362  |
| 1920.....               | 1,336,000     | 39.0                    | 52,066,000      | 119.1                                 | 62,086,000         | 22,449,930  | 1,267,391  |
| 1921 <sup>4</sup> ..... | 911,000       | 40.1                    | 36,515,000      | 95.3                                  | 34,802,000         |   |  |

<sup>1</sup> Domestic exports here include also shipments from the United States to Porto Rico and Hawaii; net imports are total imports minus reexports. Bushels are computed from pounds as reported in original by assuming 1 bushel of rough rice to yield 27½ pounds of cleaned rice.

<sup>2</sup> Acreage adjusted to census basis.

<sup>3</sup> Preliminary estimate.

TABLE 107.—Rice: Acreage, production, and farm value, by States, 1920.

| State.              | Thousands of acres. |      | Production (thousands of bushels). |        | Total value, basis Dec. 1 price (thousands of dollars). |        |
|---------------------|---------------------|------|------------------------------------|--------|---|--------|
|                     | 1920                | 1921 | 1920                               | 1921   | 1920  | 1921   |
| South Carolina..... | 7                   | 7    | 175                                | 175    | 508   | 170    |
| Georgia.....        | 4                   | 3    | 104                                | 78     | 234   | 72     |
| Florida.....        | 3                   | 4    | 72                                 | 88     | 126   | 85     |
| Alabama.....        | 1                   | 1    | 31                                 | 20     | 90  | 20     |
| Mississippi.....    | 3                   | 1    | 93                                 | 20     | 186   | 24     |
| Louisiana.....      | 700                 | 480  | 25,200                             | 16,580 | 27,720  | 14,242 |
| Texas.....          | 281                 | 185  | 9,554                              | 5,596  | 11,942  | 5,662  |
| Arkansas.....       | 175                 | 126  | 8,575                              | 6,688  | 11,233  | 6,183  |
| California.....     | 162                 | 185  | 8,262                              | 7,290  | 9,997   | 8,384  |
| United States.....  | 1,336               | 911  | 52,066                             | 36,515 | 62,036  | 34,802 |

## RICE—Continued.

TABLE 108.—Rice: Condition of crop, United States, on first of months named, 1904–1921

| Year.     | July 1. | Aug. 1. | Sept. 1. | When harvested. | Year.     | July 1. | Aug. 1. | Sept. 1. | When harvested. | Year.     | July 1. | Aug. 1. | Sept. 1. | When harvested. |
|-----------|---------|---------|----------|-----------------|-----------|---------|---------|----------|-----------------|-----------|---------|---------|----------|-----------------|
| 1904..... | 88.2    | 90.2    | 89.7     | 87.3            | 1910..... | 86.3    | 87.6    | 88.8     | 88.1            | 1916..... | 92.7    | 92.2    | 91.2     | 91.5            |
| 1905..... | 88.0    | 92.6    | 92.3     | 89.3            | 1911..... | 87.7    | 88.3    | 87.2     | 85.4            | 1917..... | 85.1    | 85.0    | 79.4     | 79.7            |
| 1906..... | 82.9    | 83.1    | 86.8     | 87.2            | 1912..... | 85.3    | 86.3    | 88.3     | 89.2            | 1918..... | 91.1    | 85.7    | 83.7     | 85.4            |
| 1907..... | 88.7    | 88.6    | 87.0     | 88.7            | 1913..... | 88.4    | 88.7    | 88.0     | 80.3            | 1919..... | 39.5    | 90.4    | 91.2     | 91.3            |
| 1908..... | 92.9    | 94.1    | 93.5     | 87.7            | 1914..... | 86.5    | 87.6    | 88.9     | 88.0            | 1920..... | 90.0    | 88.7    | 88.3     | 88.1            |
| 1909..... | 90.7    | 84.5    | 84.7     | 81.2            | 1915..... | 90.5    | 90.0    | 82.3     | 80.9            | 1921..... | 88.0    | 86.5    | 83.8     | 84.6            |

TABLE 109.—Rice: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | July.           | August.         | September.      | October.        | Final estimate. |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> |
| 1912.....    | 23,000          | 23,000          | 23,000          | 24,000          | 25,054          |
| 1913.....    | 27,000          | 27,000          | 27,000          | 25,000          | 25,744          |
| 1914.....    | 23,619          | 23,925          | 24,437          | 24,453          | 23,649          |
| 1915.....    | 29,921          | 29,762          | 26,261          | 26,251          | 28,947          |
| 1916.....    | 34,182          | 34,193          | 32,823          | 33,160          | 40,861          |
| 1917.....    | 34,372          | 34,566          | 32,237          | 33,256          | 34,739          |
| 1918.....    | 43,373          | 41,593          | 40,879          | 41,918          | 38,606          |
| 1919.....    | 42,487          | 43,427          | 44,383          | 44,261          | 41,985          |
| 1920.....    | 52,055          | 52,000          | 52,152          | 52,298          | 52,066          |
| Average..... | 34,445          | 34,385          | 33,686          | 33,844          | 34,628          |
| 1921.....    | 33,603          | 33,480          | 32,661          | 33,020          | 36,515          |

1 Preliminary.

TABLE 110.—Rice: Yield per acre, price per bushel Dec. 1, and value per acre, by States.

| State.     | Yield per acre (bushels).  |      |      |      |      |      | Farm price per bushel (cents). |      |      |      |      |      |       |       |       |       | Value per acre (dollars). <sup>1</sup> |                            |       |
|------------|----------------------------|------|------|------|------|------|--------------------------------|------|------|------|------|------|-------|-------|-------|-------|--|----------------------------|-------|
|            | 5-year average, 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921 | 10-year average, 1912-1921.    | 1912 | 1913 | 1914 | 1915 | 1916 | 1917  | 1918  | 1919  | 1920  | 1921                                   | 5-year average, 1916-1920. | 1921  |
| S. C.....  | 24.4                       | 25.0 | 23.0 | 24.0 | 25.0 | 25.0 | 153                            | 93   | 90   | 92   | 90   | 90   | 195   | 195   | 300   | 290   | 97                                     | 50.14                      | 24.25 |
| Ga.....    | 23.4                       | 30.0 | 26.0 | 24.0 | 26.0 | 26.0 | 140                            | 90   | 83   | 89   | 88   | 87   | 195   | 175   | 275   | 225   | 92                                     | 49.18                      | 23.92 |
| Fla.....   | 24.4                       | 26.0 | 24.0 | 26.0 | 24.0 | 22.0 | 124                            | 90   | 60   | 70   | 75   | 75   | 195   | 140   | 263   | 175   | 97                                     | 42.69                      | 21.84 |
| Ala.....   | 25.9                       | 27.0 | 25.0 | 26.4 | 31.0 | 20.0 | 137                            | 90   | 60   | 70   | 75   | 75   | 190   | 150   | 270   | 290   | 100                                    | 53.75                      | 20.00 |
| Miss.....  | 26.6                       | 30.0 | 23.0 | 29.1 | 31.0 | 20.0 | 126                            | 90   | 70   | 85   | 88   | 80   | 190   | 150   | 190   | 200   | 118                                    | 46.24                      | 23.00 |
| La.....    | 33.1                       | 31.0 | 28.3 | 35.2 | 36.0 | 34.5 | 130                            | 93   | 84   | 93   | 90   | 90   | 190   | 195   | 271   | 110   | 86                                     | 53.29                      | 29.67 |
| Texas..... | 32.8                       | 30.0 | 32.0 | 32.0 | 34.0 | 36.1 | 135                            | 94   | 86   | 92   | 89   | 86   | 200   | 197   | 280   | 125   | 101                                    | 53.77                      | 36.46 |
| Ark.....   | 45.5                       | 41.0 | 37.9 | 46.0 | 49.0 | 53.5 | 130                            | 94   | 90   | 90   | 95   | 96   | 190   | 180   | 240   | 131   | 92                                     | 73.84                      | 40.22 |
| Calif..... | 53.7                       | 68.0 | 65.5 | 60.0 | 51.0 | 54.0 | 133                            | 91   | 100  | 100  | 90   | 78   | 175   | 190   | 267   | 121   | 115                                    | 102.36                     | 62.10 |
| U. S.....  | 37.5                       | 35.4 | 34.5 | 39.5 | 39.0 | 40.1 | 131.3                          | 93.5 | 85.8 | 92.4 | 90.6 | 88.9 | 199.6 | 191.8 | 206.6 | 119.1 | 95.3                                   | 65.37                      | 33.20 |

<sup>1</sup> Based upon farm price Dec. 1.

## RICE—Continued.

TABLE 111.—Rice: Extent and causes of yearly crop losses, 1909-1920.

| Year.        | Deficient moisture. | Excessive moisture. | Floods. | Frost and freeze. | Hail.            | Hot winds.       | Storms. | Total climate. | Plant disease. | Insect pests. | Animal pests.    | Defective seed. | Total. |
|--------------|---------------------|---------------------|---------|-------------------|------------------|------------------|---------|----------------|----------------|---------------|------------------|-----------------|--------|
|              | P. ct.              | P. ct.              | P. ct.  | P. ct.            | P. ct.           | P. ct.           | P. ct.  | P. ct.         | P. ct.         | P. ct.        | P. ct.           | P. ct.          | P. ct. |
| 1920.....    | 0.5                 | 8.0                 | 0.4     | .....             | .....            | 1.2              | 0.2     | 10.3           | 3.1            | 1.6           | .....            | .....           | 10.7   |
| 1919.....    | 1.0                 | 12.8                | 1.1     | 0.3               | .....            | .1               | 2.6     | 18.4           | .3             | .5            | 0.7              | 0.1             | 20.0   |
| 1918.....    | 7.2                 | 7.2                 | 2.5     | .2                | .....            | .4               | 1.5     | 19.0           | .3             | 1.2           | ( <sup>1</sup> ) | .....           | 21.7   |
| 1917.....    | 17.3                | .7                  | .1      | 1.5               | 0.1              | .1               | .1      | 20.0           | .5             | .2            | .5               | .1              | 25.4   |
| 1916.....    | 4.8                 | .2                  | .....   | .4                | .....            | .3               | .2      | 6.2            | 1.1            | .3            | .....            | .2              | 9.5    |
| 1915.....    | 7.0                 | .6                  | .1      | .3                | .....            | .4               | 8.1     | 16.7           | .4             | .3            | .....            | .....           | 19.4   |
| 1914.....    | 5.3                 | 2.3                 | .1      | .....             | ( <sup>1</sup> ) | .6               | .6      | 10.1           | .1             | 1.3           | ( <sup>1</sup> ) | .3              | 17.5   |
| 1913.....    | 3.9                 | 14.8                | 5.8     | .....             | .....            | ( <sup>1</sup> ) | .....   | 24.1           | .1             | .7            | .....            | .....           | 28.5   |
| 1912.....    | 3.1                 | 1.1                 | 0.2     | .....             | .....            | .6               | .5      | 11.6           | 2.5            | 2.0           | .5               | .6              | 19.6   |
| 1911.....    | 3.5                 | 3.2                 | .....   | .2                | .....            | .7               | .....   | 10.6           | .7             | .6            | .5               | .1              | 14.5   |
| 1910.....    | 7.2                 | 1.7                 | .....   | .1                | .....            | .1               | 1.0     | 10.1           | 3.4            | .4            | 1.2              | .3              | 17.3   |
| 1909.....    | 4.6                 | .1                  | .....   | .....             | .....            | 1.1              | 6.6     | 12.4           | 2.7            | .9            | .2               | .1              | 17.0   |
| Average..... | 5.7                 | 4.4                 | 2.0     | .4                | ( <sup>1</sup> ) | .5               | 2.1     | 14.1           | 1.3            | .8            | .4               | .2              | 18.9   |

<sup>1</sup> Less than 0.05 per cent.

TABLE 112.—Rice: International trade, calendar years 1909-1920.

Mostly cleaned rice. Under rice is included paddy, unhusked, rough, cleaned, polished, broken, and cargo rice, in addition to rice flour and meal. Rice bran is not included. Rough rice or paddy, where specifically reported, has been reduced to terms of cleaned rice at ratio of 162 pounds of rough or unhusked to 100 pounds of cleaned. "Rice, other than whole or cleaned rice," in the returns of United Kingdom is not considered paddy, since the chief sources of supply indicate that it is practically all husked rice. Cargo rice, a mixture of husked and unhusked, is included without being reduced to terms of cleaned. Broken rice and rice flour and meal are taken without being reduced to terms of whole cleaned rice. See "General notes" Table 17.

| Country.                              | Average, 1909-1913.   |                         | 1918                  |                         | 1919                  |                         | 1920                  |                         |
|---------------------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
|                                       | Imports.              | Exports.                | Imports.              | Exports.                | Imports.              | Exports.                | Imports.              | Exports.                |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> |                       |                         |                       |                         |                       |                         |                       |                         |
| British India.....                    | 1,000 lbs.<br>278,272 | 1,000 lbs.<br>5,337,516 | 1,000 lbs.<br>341,532 | 1,000 lbs.<br>5,488,517 | 1,000 lbs.<br>285,928 | 1,000 lbs.<br>1,581,737 | 1,000 lbs.<br>176,082 | 1,000 lbs.<br>2,390,397 |
| French Indo-China.....                | 41                    | 2,288,040               | .....                 | 3,550,283               | .....                 | 2,100,962               | .....                 | .....                   |
| Siam.....                             | .....                 | 1,928,507               | 8                     | 1,893,336               | 2                     | 987,873                 | 5                     | 621,308                 |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                       |                         |                       |                         |                       |                         |                       |                         |
| Austria-Hungary.....                  | 183,411               | 461                     | .....                 | .....                   | .....                 | .....                   | 128,405               | .....                   |
| Belgium.....                          | 180,830               | 99,948                  | .....                 | .....                   | 27,527                | 8,233                   | 49,192                | 5,523                   |
| Brazil.....                           | 24,758                | 4102                    | 2                     | 61,726                  | 2                     | 62,671                  | 14                    | 206,758                 |
| Ceylon.....                           | 821,654               | .....                   | 762,405               | ( <sup>1</sup> )        | 650,324               | .....                   | 678,655               | .....                   |
| China.....                            | 704,992               | .....                   | 931,203               | 4,437                   | 241,300               | 163,092                 | 153,607               | 41,578                  |
| Cuba.....                             | 292,207               | .....                   | 387,892               | .....                   | 324,412               | .....                   | .....                 | .....                   |
| Dutch East Indies.....                | 1,178,111             | 132,400                 | 1,535,573             | 5,073                   | 610,582               | 9,031                   | .....                 | 5,974                   |
| Egypt.....                            | 95,690                | 53,700                  | 10,610                | 28,838                  | 203                   | 40,426                  | 398                   | 86,961                  |
| France.....                           | 517,851               | 79,087                  | 379,962               | 3,807                   | 349,761               | 23,404                  | 197,119               | 172,585                 |
| Germany.....                          | 915,772               | 306,623                 | .....                 | .....                   | .....                 | .....                   | 172,585               | 1,382                   |
| Japan.....                            | 655,676               | 61,936                  | 1,549,056             | 57,744                  | 1,647,461             | 19,813                  | 157,028               | 25,632                  |
| Mauritius.....                        | 132,543               | 41,446                  | 131,665               | .....                   | 90,619                | .....                   | 142,049               | .....                   |
| Netherlands.....                      | 778,832               | 476,276                 | 10,755                | 3                       | 44,830                | 223                     | 49,618                | 2,490                   |
| Penang.....                           | 511,035               | 357,548                 | 522,641               | 303,572                 | .....                 | .....                   | 301,029               | 193,904                 |
| Perak.....                            | 179,187               | 43,312                  | .....                 | 11,239                  | 2,891                 | .....                   | 101,165               | 26,605                  |
| Philippine Islands.....               | 412,781               | 4                       | 428,807               | 206                     | 118,025               | 110                     | 170,491               | 69                      |
| Russia.....                           | 250,461               | 5,746                   | .....                 | .....                   | .....                 | .....                   | .....                 | .....                   |
| Selangor.....                         | 159,173               | 6173                    | .....                 | 606                     | .....                 | 840                     | 189,938               | 7                       |
| Singapore.....                        | 975,095               | 758,875                 | 1,385,009             | 1,135,513               | .....                 | .....                   | 445,193               | 221,850                 |
| United Kingdom.....                   | 768,853               | 90,564                  | 849,032               | 1,818                   | 445,828               | 89,074                  | 422,221               | 82,263                  |
| United States.....                    | 209,814               | 16,215                  | 536,089               | 107,938                 | 183,208               | 376,576                 | 131,647               | 392,613                 |
| Other countries.....                  | 1,242,651             | 592,361                 | 1,368,208             | 123,416                 | 495,436               | 51,046                  | 230,802               | 130,249                 |
| Total.....                            | 11,430,950            | 12,720,845              | 11,178,249            | 12,923,111              | 5,401,546             | 5,536,602               | 3,796,378             | 4,428,713               |

<sup>1</sup> Austria only, new boundaries.<sup>2</sup> Four-year average.<sup>3</sup> One year.<sup>2</sup> Three-year average.<sup>4</sup> Two-year average.



## CEREALS CONSUMED.

TABLE 113.—Consumption of specified cereals in selected countries, yearly average, 1909-1918.

| Country and period. | Barley. <sup>1</sup> |             | Corn. <sup>2</sup> |             | Oats.       |             |
|---------------------|----------------------|-------------|--------------------|-------------|-------------|-------------|
|                     | Total.               | Per capita. | Total.             | Per capita. | Total.      | Per capita. |
| Austria-Hungary:    | 1,000 bush.          | Bushels.    | 1,000 bush.        | Bushels.    | 1,000 bush. | Bushels.    |
| 1909-1913.....      | 140,390              | 2.71        | 231,675            | 4.47        | 241,534     | 4.67        |
| Belgium:            |                      |             |                    |             |             |             |
| 1909-1913.....      | 19,303               | 2.57        | 17,267             | 2.30        | 49,090      | 6.55        |
| France:             |                      |             |                    |             |             |             |
| 1909-1913.....      | 52,552               | 1.33        | 42,035             | 1.03        | 339,865     | 8.59        |
| 1914-1918.....      | 43,796               | 1.16        | 28,357             | .78         | 279,832     | 7.41        |
| Germany:            |                      |             |                    |             |             |             |
| 1909-1913.....      | 302,001              | 4.60        | 31,907             | .49         | 595,227     | 9.05        |
| India (British):    |                      |             |                    |             |             |             |
| 1909-1913.....      | * 33,010             | .14         | 87,240             | .36         |             |             |
| 1914-1918.....      | 136,325              | .54         | 89,146             | .35         |             |             |
| Italy:              |                      |             |                    |             |             |             |
| 1909-1913.....      | 10,022               | .31         | 114,852            | 3.31        | 45,095      | 1.30        |
| 1914-1918.....      | 11,179               | .31         | 101,011            | 2.77        | 50,431      | 1.55        |
| Japan:              |                      |             |                    |             |             |             |
| 1909-1913.....      | 89,542               | 1.73        | * 3,391            | .07         |             |             |
| 1914-1918.....      | 83,407               | 1.59        | 3,980              | .07         |             |             |
| Netherlands:        |                      |             |                    |             |             |             |
| 1909-1913.....      | 14,334               | 2.38        | 21,735             | 3.60        | 23,607      | 4.41        |
| 1914-1918.....      | 6,463                | 1.00        | 17,445             | 2.69        | 22,705      | 3.63        |
| United Kingdom:     |                      |             |                    |             |             |             |
| 1909-1913.....      | 112,820              | 2.50        | 80,602             | 1.78        | 249,129     | 5.51        |
| 1914-1918.....      | 87,044               | 2.00        | 58,287             | 1.34        | 246,879     | 5.00        |
| United States: *    |                      |             |                    |             |             |             |
| 1909-1913.....      | 168,859              | 1.80        | 2,669,048          | 28.50       | 1,106,063   | 11.81       |
| 1914-1918.....      | 188,516              | 1.87        | 2,719,378          | 28.99       | 1,309,844   | 13.09       |

| Country and period. | Rice. <sup>3</sup> |             | Rye. <sup>4</sup> |             | Wheat. <sup>5</sup> |             |
|---------------------|--------------------|-------------|-------------------|-------------|---------------------|-------------|
|                     | Total.             | Per capita. | Total.            | Per capita. | Total.              | Per capita. |
| Austria-Hungary:    | 1,000 lbs.         | Pounds.     | 1,000 bush.       | Bushels.    | 1,000 bush.         | Bushels.    |
| 1909-1913.....      | 182,921            | 3.53        | 162,887           | 3.15        | 228,110             | 4.41        |
| Belgium:            |                    |             |                   |             |                     |             |
| 1909-1913.....      | 80,882             | 16.79       | 27,564            | 3.68        | 63,978              | 8.53        |
| France:             |                    |             |                   |             |                     |             |
| 1909-1913.....      | 440,791            | 11.14       | 51,844            | 1.31        | 260,927             | 9.12        |
| 1914-1918.....      | 469,910            | 12.44       | 90,591            | .82         | 294,950             | 7.81        |
| Germany:            |                    |             |                   |             |                     |             |
| 1909-1913.....      | 517,145            | 7.86        | 418,798           | 6.37        | 220,458             | 3.35        |
| India (British):    |                    |             |                   |             |                     |             |
| 1909-1913.....      | 67,890,542         | 277.94      |                   |             | 301,147             | 1.23        |
| 1914-1918.....      | 66,063,356         | 263.58      |                   |             | 304,056             | 1.21        |
| Italy:              |                    |             |                   |             |                     |             |
| 1909-1913.....      | 518,308            | 14.94       | 5,945             | .17         | 236,479             | 0.82        |
| 1914-1918.....      | 855,588            | 23.50       | 5,966             | .16         | 242,030             | 0.65        |
| Japan:              |                    |             |                   |             |                     |             |
| 1909-1913.....      | 14,002,192         | 282.08      |                   |             | 29,838              | .57         |
| 1914-1918.....      | 18,040,238         | 324.89      |                   |             | 29,698              | .53         |
| Netherlands:        |                    |             |                   |             |                     |             |
| 1909-1913.....      | 302,407            | 50.15       | 27,961            | 4.64        | 26,952              | 4.47        |
| 1914-1918.....      | 309,190            | 16.74       | 14,146            | 2.17        | 22,831              | 3.54        |
| United Kingdom:     |                    |             |                   |             |                     |             |
| 1909-1913.....      | 678,290            | 15.01       | 3,873             | .09         | 277,535             | 0.14        |
| 1914-1918.....      | 883,137            | 20.26       | 3,478             | .08         | 264,868             | 0.08        |
| United States: *    |                    |             |                   |             |                     |             |
| 1909-1913.....      | 874,765            | 9.34        | 31,580            | .24         | 531,813             | 5.08        |
| 1914-1918.....      | 1,102,844          | 10.25       | 41,335            | .41         | 597,476             | 5.93        |

\* Includes malt converted to barley.

\* Includes corn meal converted to corn.

\* Two-year average 1912-13.

\* Includes insular possessions.

\* Mostly cleaned and includes rice flour, rice meal, and broken rice.

\* Includes flour converted to grain.

# STATISTICS OF CROPS OTHER THAN GRAIN CROPS.

## POTATOES.

TABLE 114.—Potatoes: Area and production in undermentioned countries, 1909-1921.

| Country.                              | Area.                                   |                         |                         |                         | Production.                             |                           |                           |                           |
|---------------------------------------|---|-------------------------|-------------------------|-------------------------|---|---------------------------|---------------------------|---------------------------|
|                                       | Average, <sup>1</sup><br>1909-<br>1913. | 1919                    | 1920                    | 1921                    | Average, <sup>1</sup><br>1909-<br>1913. | 1919                      | 1920                      | 1921                      |
| <b>NORTH AMERICA.</b>                 | <i>1,000<br/>acres.</i>                 | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>acres.</i> | <i>1,000<br/>bushels.</i>               | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> | <i>1,000<br/>bushels.</i> |
| United States.....                    | 3,680                                   | 3,542                   | 3,687                   | 3,815                   | 356,627                                 | 322,867                   | 403,296                   | 346,823                   |
| Canada:                               |   |                         |                         |                         |   |                           |                           |                           |
| Prince Edward Island.....             | 32                                      | 36                      | 36                      | 37                      | 5,901                                   | 4,529                     | 6,175                     | 5,066                     |
| Nova Scotia.....                      | 32                                      | 62                      | 50                      | 39                      | 6,627                                   | 9,992                     | 10,209                    | 6,414                     |
| New Brunswick.....                    | 42                                      | 78                      | 78                      | 75                      | 8,898                                   | 10,790                    | 15,510                    | 16,192                    |
| Quebec.....                           | 120                                     | 816                     | 311                     | 222                     | 19,723                                  | 57,280                    | 57,633                    | 36,089                    |
| Ontario.....                          | 156                                     | 187                     | 158                     | 164                     | 20,720                                  | 15,145                    | 22,962                    | 15,400                    |
| Manitoba.....                         | 26                                      | 42                      | 37                      | 38                      | 4,755                                   | 5,288                     | 3,410                     | 5,853                     |
| Saskatchewan.....                     | 29                                      | 66                      | 54                      | 59                      | 4,812                                   | 11,250                    | 6,861                     | 10,344                    |
| Alberta.....                          | 24                                      | 46                      | 43                      | 51                      | 3,934                                   | 8,241                     | 7,138                     | 8,143                     |
| British Columbia.....                 | 14                                      | 18                      | 18                      | 17                      | 3,128                                   | 3,060                     | 2,933                     | 2,940                     |
| Total Canada.....                     | 475                                     | 819                     | 785                     | 702                     | 78,498                                  | 125,575                   | 133,831                   | 107,346                   |
| Mexico.....                           |   |                         |                         |                         | 924                                     | 462                       |                           |                           |
| Newfoundland.....                     |   |                         |                         |                         | 1,495                                   |                           |                           |                           |
| Total North America.....              | 4,155                                   |                         |                         |                         | 437,544                                 |                           |                           |                           |
| <b>SOUTH AMERICA.</b>                 |   |                         |                         |                         |   |                           |                           |                           |
| Argentina.....                        | 235                                     |                         | 324                     |                         | 40,216                                  |                           |                           |                           |
| Chile.....                            | 66                                      | 78                      | 77                      | 94                      | 8,023                                   | 8,700                     | 10,944                    | 11,837                    |
| Total South America.....              | 301                                     |                         | 401                     |                         | 48,239                                  |                           |                           |                           |
| <b>EUROPE.</b>                        |   |                         |                         |                         |   |                           |                           |                           |
| Austria.....                          | 3,105                                   | 239                     | 290                     | 313                     | 456,485                                 | 20,022                    | 24,600                    | 26,207                    |
| Croatia Slavonia <sup>1</sup> .....   | 193                                     |                         |                         |                         | 22,254                                  |                           |                           |                           |
| Bosnia Herzegovina <sup>1</sup> ..... | 69                                      |                         |                         |                         | 3,359                                   |                           |                           |                           |
| Belgium.....                          | 390                                     | 388                     | 368                     | 419                     | 107,021                                 | 103,931                   | 82,913                    | 93,329                    |
| Bulgaria.....                         | 8                                       | 12                      | 15                      | 19                      | 454                                     | 739                       | 4,632                     | 1,650                     |
| Czechoslovakia.....                   |   | 898                     | 1,494                   | 1,517                   |   | 84,093                    | 180,799                   | 136,429                   |
| Denmark.....                          | 145                                     | 237                     | 228                     | 208                     | 32,440                                  | 53,087                    | 45,310                    |                           |
| Finland.....                          | 184                                     | 204                     | 208                     | 198                     | 20,975                                  | 17,718                    | 17,865                    | 18,245                    |
| France.....                           | 3,841                                   | 3,299                   | 3,770                   | 3,807                   | 489,377                                 | 312,712                   | 427,610                   | 323,527                   |
| Germany.....                          | 8,290                                   | 5,389                   | 6,078                   | 6,627                   | 1,081,959                               | 789,210                   | 1,037,954                 | 985,294                   |
| Hungary proper.....                   | 1,521                                   |                         | 626                     | 656                     | 180,103                                 |                           | 75,968                    | 45,592                    |
| Italy.....                            | 658                                     | 793                     | 744                     | 741                     | 60,813                                  | 60,989                    | 52,261                    | 55,116                    |
| Yugo-Slavia.....                      |   |                         | 349                     |                         |   |                           | 38,452                    | 34,908                    |
| Luxemburg.....                        | 36                                      | 33                      | 33                      | 33                      | 6,439                                   | 6,505                     | 5,244                     | 2,756                     |
| Malta.....                            | 4                                       |                         |                         |                         | 672                                     |                           | 554                       |                           |
| Netherlands.....                      | 414                                     | 445                     | 427                     | 430                     | 110,153                                 | 105,318                   | 91,304                    | 84,703                    |
| Norway.....                           | 102                                     | 132                     | 130                     | 130                     | 24,821                                  | 37,912                    | 31,076                    | 27,305                    |
| Rumania <sup>1</sup> .....            | 28                                      | 142                     | 240                     | 402                     | 3,634                                   | 10,443                    | 3,226                     |                           |
| Do ".....                             | 58                                      | 38                      |                         |                         | 1,144                                   | 401                       |                           |                           |
| Russia proper <sup>2</sup> .....      | 8,302                                   |                         |                         |                         | 882,798                                 |                           |                           |                           |
| Poland.....                           | 2,628                                   | 2,846                   | 4,062                   | 4,777                   | 373,917                                 | 336,315                   | 644,920                   | 567,063                   |
| Northern Caucasus <sup>3</sup> .....  | 197                                     |                         |                         |                         | 15,603                                  |                           |                           |                           |
| Serbia <sup>4</sup> .....             | 30                                      |                         |                         |                         | 2,201                                   |                           |                           |                           |
| Spain.....                            | 687                                     | 805                     | 841                     | 780                     | 93,413                                  | 101,020                   | 107,834                   | 102,225                   |
| Sweden.....                           | 379                                     | 417                     | 367                     | 363                     | 60,327                                  | 77,574                    | 61,655                    | 62,390                    |
| Switzerland.....                      | 186                                     | 136                     | 123                     | 113                     | 40,537                                  | 27,925                    | 28,256                    | 25,373                    |

<sup>1</sup> Five-year average, except in a few cases where statistics were unavailable.

<sup>2</sup> Unofficial.

<sup>3</sup> Old boundaries.

<sup>4</sup> Average 1915-1916.

<sup>5</sup> Bohemia, Moravia, and Silesia.

<sup>6</sup> Alsace-Lorraine included with Germany.

<sup>7</sup> Grown alone.

<sup>8</sup> Former Kingdom, Bessarabia and Bukovina.

<sup>9</sup> Former Kingdom, Bessarabia, Bukovina, and Transylvania.

<sup>10</sup> Bessarabia only.

<sup>11</sup> Grown with corn.

<sup>12</sup> Former Russian Poland, Western Galicia, and Posen.

## POTATOES—Continued.

TABLE 114.—Potatoes: Area and production in undermentioned countries, 1909-1921—Continued.

| Country.                 | Area.               |                 |                 |                 | Production.         |                   |                   |                   |
|--------------------------|---------------------|-----------------|-----------------|-----------------|---------------------|-------------------|-------------------|-------------------|
|                          | Average, 1909-1913. | 1910            | 1920            | 1921            | Average, 1909-1913. | 1919              | 1920              | 1921              |
| <b>EUROPE—continued.</b> |                     |                 |                 |                 |                     |                   |                   |                   |
| United Kingdom:          | 1,000<br>acres.     | 1,000<br>acres. | 1,000<br>acres. | 1,000<br>acres. | 1,000<br>bushels.   | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. |
| England.....             | 408                 | 446             | 517             | 532             | 94,487              | 95,984            | 113,979           | 104,981           |
| Scotland.....            | 145                 | 155             | 162             | 154             | 34,674              | 31,061            | 46,181            | 3,827             |
| Wales.....               | 26                  | 29              | 28              | 26              | 5,403               | 6,043             | 3,659             | 5,451             |
| Ireland.....             | 590                 | 589             | 584             | 568             | 119,874             | 102,555           | 74,141            | 95,427            |
| Total United Kingdom..   | 1,169               | 1,219           | 1,291           | 1,280           | 254,438             | 235,648           | 237,960           | 244,636           |
| Total Europe.....        | 32,594              |                 |                 |                 | 4,905,397           |                   |                   |                   |
| <b>ASIA.</b>             |                     |                 |                 |                 |                     |                   |                   |                   |
| Japan.....               | 174                 | 344             | 334             |                 | 24,738              | 67,236            | 47,278            |                   |
| Russia (Asiatic).....    | 399                 |                 |                 |                 | 33,151              |                   |                   |                   |
| Total Asia.....          | 573                 |                 |                 |                 | 57,889              |                   |                   |                   |
| <b>AFRICA.</b>           |                     |                 |                 |                 |                     |                   |                   |                   |
| Algeria.....             | 45                  | 44              | 42              | 46              | 1,783               |                   | 985               | 673               |
| Union South Africa.....  | 62                  |                 |                 |                 | 3,269               | 13 3,669          | 13 3,668          | 13 3,397          |
| Total Africa.....        | 107                 |                 |                 |                 | 5,052               |                   |                   |                   |
| <b>AUSTRALASIA.</b>      |                     |                 |                 |                 |                     |                   |                   |                   |
| Australia:               |                     |                 |                 |                 |                     |                   |                   |                   |
| Queensland.....          | 8                   | 6               | 4               |                 | 524                 | 414               | 293               |                   |
| New South Wales.....     | 39                  | 21              | 20              |                 | 3,378               | 1,133             | 1,867             |                   |
| Victoria.....            | 55                  | 52              | 54              |                 | 5,983               | 5,135             | 5,446             |                   |
| South Australia.....     | 8                   | 3               | 3               |                 | 894                 | 493               | 412               |                   |
| Western Australia.....   | 3                   | 4               | 4               |                 | 309                 | 437               | 494               |                   |
| Tasmania.....            | 24                  | 25              | 29              |                 | 2,989               | 2,110             | 2,472             |                   |
| Total Australia.....     | 137                 | 111             | 114             |                 | 14,077              | 9,722             | 10,984            |                   |
| New Zealand.....         | 28                  | 19              | 25              | 22              | 6,047               | 3,938             | 5,402             |                   |
| Total Australasia.....   | 165                 | 130             | 139             |                 | 20,124              | 13,660            | 16,386            |                   |
| Grand total.....         | 37,895              |                 |                 |                 | 5,474,245           |                   |                   |                   |

<sup>12</sup> Including quantities enumerated in Native Locations, Reserves, etc., in 1913.

TABLE 115.—Potatoes: World production so far as reported, 1900-1921.

| Year.     | Production.     | Year.     | Production.     | Year.     | Production.     | Year.     | Production.     |
|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|
|           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |           | <i>Bushels.</i> |
| 1900..... | 4,382,031,000   | 1906..... | 4,789,112,000   | 1912..... | 5,872,953,000   | 1918..... | 2,744,444,000   |
| 1901..... | 4,669,953,000   | 1907..... | 5,122,073,000   | 1913..... | 5,802,910,000   | 1919..... | 2,063,720,000   |
| 1902..... | 4,674,000,000   | 1908..... | 5,295,043,000   | 1914..... | 5,016,291,000   | 1920..... | 2,815,826,000   |
| 1903..... | 4,409,793,000   | 1909..... | 5,595,667,000   | 1915..... | 4,843,726,000   | 1921..... | 3,303,480,000   |
| 1904..... | 4,298,049,000   | 1910..... | 5,242,278,000   | 1916..... | 3,197,224,000   |           |                 |
| 1905..... | 5,254,598,000   | 1911..... | 4,842,109,000   | 1917..... | 3,103,876,000   |           |                 |

# Statistics of Potatoes.

583

## POTATOES—Continued.

TABLE 116.—Potatoes: Average yield per acre of undermentioned countries, 1900-1921.

| Year.          | United States. | Russia (European). | Germany. | Austria. | Hungary proper. | France.  | United Kingdom. |
|----------------|----------------|--------------------|----------|----------|-----------------|----------|-----------------|
| Average:       | Bushels.       | Bushels.           | Bushels. | Bushels. | Bushels.        | Bushels. | Bushels.        |
| 1900-1909..... | 91.4           | 99.9               | 200.0    | 151.1    | 118.7           | 133.8    | 193.8           |
| 1910-1919..... | 95.3           | 107.9              | 187.9    | 123.2    | 122.2           | 108.0    | 217.1           |
| 1919.....      | 91.2           | .....              | 145.4    | 83.8     | .....           | 94.8     | 193.3           |
| 1920.....      | 110.3          | .....              | 170.8    | 84.8     | 121.4           | 113.0    | 184.3           |
| 1921.....      | 90.9           | .....              | 148.9    | 83.7     | 69.5            | 85.0     | 191.2           |

<sup>1</sup> 7-year average.

<sup>2</sup> England and Wales.

TABLE 117.—Potatoes: Acreage, production, value, exports, etc., in the United States, 1849-1921.

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of acres are obtained by applying estimated percentages of increase or decrease to the published acreage of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. Acreages have been revised for years 1890-1908 so as to be consistent with the following as well as the preceding census acreage, and total production and farm values are adjusted accordingly.

| Year.                   | Acre-<br>age<br>(000<br>omit-<br>ted). | Aver-<br>age<br>yield<br>per<br>acre. | Produc-<br>tion (000<br>omitted). | Aver-<br>age<br>farm<br>price<br>per<br>bushel,<br>Dec. 1. | Farm<br>value<br>Dec. 1. | Chicago cash price per bushel,<br>fair to fancy. <sup>1</sup> |        |                   |        | Domestic<br>exports<br>fiscal<br>year<br>beginning<br>July 1. | Imports<br>during<br>fiscal<br>year<br>beginning<br>July 1. |
|-------------------------|--|---------------------------------------|-----------------------------------|--|--------------------------|---|--------|-------------------|--------|---|---|
|                         |  |                                       |                                   |  |                          | December.   |        | Following<br>May. |        |   |   |
|                         |  |                                       |                                   |  |                          | Low.  | High.  | Low.              | High.  |   |   |
|                         | Acres.                                 | Bush.                                 | Bushels.                          | Cents.   | Dollars.                 | Cents.  | Cents. | Cents.            | Cents. | Bushels.  | Bushels.  |
| 1849.....               |  |                                       | 65,798                            |  |                          |   |        |                   |        |   |   |
| 1850.....               |  |                                       | 117,149                           |  |                          |   |        |                   |        |   |   |
| 1850-1875.....          | 1,261                                  | 93.0                                  | 117,268                           | 53.5   | 62,754                   |   |        |                   |        | 549,755   | 235,346   |
| 1876-1885.....          | 1,998                                  | 81.2                                  | 162,228                           | 50.8   | 82,035                   |   |        |                   |        | 551,248   | 2,342,421   |
| 1886-1895.....          | 2,653                                  | 74.4                                  | 197,285                           | 47.1   | 92,908                   | 46  | 56     | 49                | 72     | 551,736   | 2,811,614   |
| 1896.....               | 2,975                                  | 91.4                                  | 271,769                           | 29.0   | 78,783                   | 18  | 26     | 19                | 26     | 926,646   | 246,178   |
| 1897.....               | 2,813                                  | 87.9                                  | 191,025                           | 54.2   | 108,442                  | 50  | 62     | 60                | 87     | 605,187   | 1,171,378   |
| 1898.....               | 2,811                                  | 77.0                                  | 218,772                           | 41.5   | 90,897                   | 30  | 36     | 33                | 52     | 579,833   | 530,420   |
| 1899.....               | 2,839                                  | 88.6                                  | 260,257                           | 30.7   | 103,385                  | 35  | 40     | 27                | 39     | 809,472   | 155,861   |
| 1900.....               | 2,987                                  | 82.0                                  | 247,759                           | 42.3   | 104,764                  | 40  | 48     | 35                | 60     | 741,483   | 371,611   |
| 1901.....               | 2,906                                  | 86.3                                  | 198,626                           | 76.3   | 151,602                  | 75  | 82     | 58                | 100    | 528,484   | 7,650,162   |
| 1902.....               | 3,078                                  | 95.5                                  | 293,918                           | 46.9   | 137,730                  | 42  | 48     | 42                | 60     | 813,075   | 356,505   |
| 1903.....               | 3,080                                  | 85.1                                  | 262,053                           | 60.9   | 159,620                  | 60  | 66     | 65                | 116    | 484,042   | 3,161,581   |
| 1904.....               | 3,172                                  | 111.1                                 | 352,268                           | 44.8   | 157,046                  | 32  | 38     | 20                | 25     | 1,163,270   | 186,199   |
| 1905.....               | 3,195                                  | 87.3                                  | 278,885                           | 61.1   | 170,340                  | 55  | 66     | 48                | 73     | 1,000,326   | 1,945,160   |
| 1906.....               | 3,244                                  | 102.2                                 | 331,685                           | 50.6   | 167,795                  | 40  | 43     | 55                | 75     | 1,530,461   | 176,917   |
| 1907.....               | 3,375                                  | 95.7                                  | 322,954                           | 61.3   | 197,863                  | 46  | 58     | 50                | 80     | 1,208,894   | 403,922   |
| 1908.....               | 3,508                                  | 88.2                                  | 302,000                           | 69.7   | 210,618                  | 60  | 77     | 70                | 150    | 763,651   | 8,383,966   |
| 1909.....               | 3,669                                  | 107.5                                 | 394,553                           | 54.2   | 213,679                  | 20  | 28     | 16                | 34     | 999,476   | 893,208   |
| 1910.....               | 3,720                                  | 93.8                                  | 346,032                           | 55.7   | 194,566                  | 30  | 48     | 35                | 75     | 2,383,887   | 218,994   |
| 1911.....               | 3,619                                  | 80.9                                  | 292,737                           | 79.9   | 233,778                  | 70  | 100    | 90                | 200    | 1,237,276   | 13,734,695  |
| 1912.....               | 3,711                                  | 113.4                                 | 420,647                           | 50.5   | 212,550                  | 40  | 65     | 33                | 70     | 2,028,861   | 337,230   |
| 1913.....               | 3,698                                  | 90.4                                  | 331,525                           | 68.7   | 227,908                  | 50  | 70     | 60                | 90     | 1,794,072   | 3,645,992   |
| 1914.....               | 3,711                                  | 110.5                                 | 409,921                           | 48.7   | 199,490                  | 30  | 66     | 34                | 150    | 3,135,474   | 270,942   |
| 1915.....               | 3,734                                  | 96.3                                  | 359,721                           | 61.7   | 221,992                  | 53  | 95     | 80                | 110    | 4,017,760   | 209,532   |
| 1916.....               | 3,565                                  | 80.5                                  | 296,953                           | 140.1  | 419,333                  | 125   | 190    | 200               | 375    | 2,489,001   | 3,079,023   |
| 1917.....               | 4,384                                  | 100.8                                 | 442,108                           | 122.8  | 542,774                  | 93  | 135    | 80                | 250    | 3,453,307   | 1,180,480   |
| 1918.....               | 4,295                                  | 95.9                                  | 411,860                           | 119.3  | 491,527                  | 90  | 225    | 125               | 250    | 3,688,840   | 3,534,076   |
| 1919 <sup>2</sup> ..... | 3,512                                  | 91.2                                  | 322,897                           | 159.5  | 514,855                  | 280   | 380    | 685               | 925    | 3,723,434   | 6,940,980   |
| 1920.....               | 3,667                                  | 110.3                                 | 403,296                           | 114.5  | 481,778                  | 120   | 225    | 40                | 500    | 4,803,159   | 3,422,189   |
| 1921.....               | 3,815                                  | 90.9                                  | 346,823                           | 111.1  | 385,192                  | 100   | 245    | 190               | 235    |   |   |

<sup>1</sup> Burbank to 1910.

<sup>2</sup> Figures adjusted to census basis.

<sup>3</sup> Per 100 pounds.

## POTATOES—Continued.

TABLE 118.—Potatoes:  *acreage, production, and total farm value, by States, 1920-21.*

| State.              | Thousands of acres. |                   | Production (thousands of bushels). |                   | Total value, basis Dec. 1 price (thousands of dollars). |                   |
|---------------------|---------------------|-------------------|------------------------------------|-------------------|---|-------------------|
|                     | 1920                | 1921 <sup>1</sup> | 1920                               | 1921 <sup>1</sup> | 1920  | 1921 <sup>1</sup> |
| Maine.....          | 123                 | 129               | 21,771                             | 37,152            | 27,214  | 31,579            |
| New Hampshire.....  | 15                  | 14                | 1,905                              | 2,240             | 2,853   | 3,024             |
| Vermont.....        | 27                  | 25                | 3,510                              | 3,750             | 4,388   | 3,900             |
| Massachusetts.....  | 32                  | 29                | 4,000                              | 3,335             | 6,090   | 5,069             |
| Rhode Island.....   | 3                   | 3                 | 380                                | 345               | 528   | 552               |
| Connecticut.....    | 24                  | 23                | 2,760                              | 2,369             | 4,140   | 3,554             |
| New York.....       | 325                 | 330               | 40,625                             | 33,990            | 47,938  | 36,709            |
| New Jersey.....     | 90                  | 95                | 14,040                             | 9,035             | 17,556  | 12,816            |
| Pennsylvania.....   | 246                 | 251               | 28,290                             | 21,536            | 35,080  | 28,709            |
| Delaware.....       | 10                  | 10                | 1,060                              | 500               | 1,060   | 550               |
| Maryland.....       | 54                  | 49                | 5,808                              | 3,185             | 5,233   | 3,504             |
| Virginia.....       | 154                 | 136               | 18,490                             | 14,088            | 17,556  | 16,157            |
| West Virginia.....  | 47                  | 48                | 5,640                              | 4,080             | 7,614   | 6,650             |
| North Carolina..... | 46                  | 46                | 4,138                              | 4,048             | 5,944   | 5,789             |
| South Carolina..... | 28                  | 30                | 2,800                              | 2,550             | 5,040   | 3,825             |
| Georgia.....        | 22                  | 23                | 1,628                              | 1,725             | 3,386   | 2,846             |
| Florida.....        | 23                  | 17                | 2,415                              | 1,564             | 4,830   | 2,972             |
| Ohio.....           | 116                 | 116               | 11,600                             | 6,728             | 15,060  | 10,423            |
| Indiana.....        | 68                  | 70                | 6,528                              | 8,570             | 8,682   | 5,176             |
| Illinois.....       | 122                 | 121               | 7,930                              | 6,413             | 11,498  | 8,978             |
| Michigan.....       | 345                 | 340               | 36,225                             | 27,900            | 33,327  | 25,840            |
| Wisconsin.....      | 308                 | 315               | 33,264                             | 21,420            | 28,607  | 20,349            |
| Minnesota.....      | 319                 | 367               | 31,581                             | 27,625            | 25,265  | 24,772            |
| Iowa.....           | 96                  | 96                | 10,560                             | 4,128             | 12,983  | 5,779             |
| Missouri.....       | 80                  | 82                | 6,560                              | 4,756             | 9,906   | 6,421             |
| North Dakota.....   | 33                  | 120               | 6,557                              | 11,520            | 6,426   | 8,064             |
| South Dakota.....   | 75                  | 80                | 7,950                              | 4,400             | 7,712   | 4,708             |
| Nebraska.....       | 85                  | 102               | 8,415                              | 3,160             | 10,098  | 9,792             |
| Kansas.....         | 60                  | 65                | 5,100                              | 4,160             | 7,650   | 5,616             |
| Kentucky.....       | 57                  | 58                | 5,643                              | 3,770             | 8,484   | 6,220             |
| Tennessee.....      | 35                  | 35                | 2,905                              | 1,820             | 4,648   | 3,008             |
| Alabama.....        | 27                  | 32                | 1,809                              | 2,400             | 3,618   | 4,080             |
| Mississippi.....    | 16                  | 16                | 1,392                              | 1,088             | 2,784   | 2,176             |
| Louisiana.....      | 27                  | 27                | 1,755                              | 1,809             | 3,563   | 3,258             |
| Texas.....          | 36                  | 37                | 1,872                              | 2,072             | 4,118   | 3,937             |
| Oklahoma.....       | 35                  | 36                | 2,590                              | 2,088             | 4,862   | 3,863             |
| Arkansas.....       | 31                  | 33                | 2,418                              | 1,815             | 4,232   | 3,267             |
| Montana.....        | 40                  | 44                | 4,400                              | 5,060             | 4,620   | 4,048             |
| Wyoming.....        | 15                  | 19                | 1,875                              | 2,052             | 2,250   | 2,421             |
| Colorado.....       | 73                  | 90                | 9,490                              | 11,070            | 7,562   | 8,081             |
| New Mexico.....     | 4                   | 4                 | 300                                | 296               | 630   | 533               |
| Arizona.....        | 4                   | 4                 | 300                                | 400               | 684   | 644               |
| Utah.....           | 16                  | 15                | 3,024                              | 2,415             | 2,419   | 2,073             |
| Nevada.....         | 4                   | 4                 | 540                                | 592               | 842   | 710               |
| Idaho.....          | 45                  | 57                | 8,100                              | 10,545            | 5,508   | 8,120             |
| Washington.....     | 53                  | 55                | 8,215                              | 7,425             | 7,804   | 7,351             |
| Oregon.....         | 43                  | 43                | 5,590                              | 3,870             | 4,472   | 4,218             |
| California.....     | 70                  | 74                | 9,800                              | 10,064            | 14,700  | 13,083            |
| United States.....  | 3,657               | 3,815             | 403,296                            | 346,623           | 461,778   | 385,192           |

<sup>1</sup> Preliminary.

POTATOES—Continued.

TABLE 119.—Potatoes: Condition of crop, United States, on 1st of months named, 1900–1921.

| Year.     | July.         | Aug.          | Sept.         | Oct.          | Year.     | July.         | Aug.          | Sept.         | Oct.          |
|-----------|---------------|---------------|---------------|---------------|-----------|---------------|---------------|---------------|---------------|
|           | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> |           | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> |
| 1900..... | 91.3          | 88.2          | 80.0          | 74.4          | 1911..... | 76.0          | 62.3          | 59.8          | 62.3          |
| 1901..... | 87.4          | 62.3          | 52.2          | 54.0          | 1912..... | 88.9          | 87.8          | 87.2          | 85.1          |
| 1902..... | 92.9          | 94.8          | 89.1          | 82.5          | 1913..... | 86.2          | 78.0          | 69.9          | 67.7          |
| 1903..... | 88.1          | 87.2          | 84.3          | 74.6          | 1914..... | 83.6          | 79.0          | 75.8          | 78.3          |
| 1904..... | 93.9          | 94.1          | 91.6          | 89.5          | 1915..... | 91.1          | 92.0          | 82.7          | 74.2          |
| 1905..... | 91.2          | 87.2          | 80.9          | 74.3          | 1916..... | 87.8          | 80.8          | 67.4          | 62.6          |
| 1906..... | 91.5          | 89.0          | 85.3          | 82.2          | 1917..... | 90.1          | 87.9          | 82.7          | 79.0          |
| 1907..... | 90.2          | 88.5          | 80.2          | 77.0          | 1918..... | 87.6          | 79.9          | 74.5          | 73.7          |
| 1908..... | 89.6          | 82.9          | 78.7          | 68.7          | 1919..... | 87.6          | 75.1          | 69.5          | 67.9          |
| 1909..... | 93.0          | 85.8          | 80.9          | 78.8          | 1920..... | 89.3          | 87.0          | 84.3          | 82.7          |
| 1910..... | 86.3          | 75.8          | 70.5          | 71.8          | 1921..... | 83.4          | 65.8          | 63.7          | 66.5          |

TABLE 120.—Potatoes: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | July.           | August.         | Septem-ber.     | October.        | Novem-ber pro-duction estimate. | Final estimate.      |
|--------------|-----------------|-----------------|-----------------|-----------------|---------------------------------|----------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>                 | <i>Bushels.</i>      |
| 1912.....    | 352,000         | 371,000         | 335,000         | 401,000         | 414,289                         | 420,647              |
| 1913.....    | 343,000         | 339,000         | 325,000         | 319,000         | 328,550                         | 331,525              |
| 1914.....    | 360,614         | 369,634         | 370,963         | 383,619         | 406,288                         | 408,921              |
| 1915.....    | 393,358         | 430,808         | 405,909         | 368,151         | 359,253                         | 359,721              |
| 1916.....    | 368,810         | 364,271         | 318,492         | 300,563         | 288,964                         | 286,953              |
| 1917.....    | 451,716         | 467,289         | 461,908         | 452,923         | 439,680                         | 442,108              |
| 1918.....    | 405,507         | 390,907         | 384,529         | 391,279         | 390,101                         | 411,880              |
| 1919.....    | 390,748         | 357,120         | 340,194         | 350,070         | 352,025                         | 322,887              |
| 1920.....    | 387,586         | 401,903         | 412,933         | 414,986         | 421,252                         | 403,296              |
| Average..... | 383,704         | 387,992         | 380,770         | 375,732         | 377,823                         | 376,544              |
| 1921.....    | 376,997         | 315,918         | 322,985         | 345,844         | 356,076                         | <sup>1</sup> 346,823 |

<sup>1</sup> Preliminary.

## POTATOES—Continued.

TABLE 121.—Potatoes: Yield per acre, price per bushel December 1, and value per acre, by States.

| State.     | Yield per acre (bushels).     |       |      |      |       | Farm price per bushel (cents). |                                |      |      |      |      |       |       |       |       | Value per acre (dollars). <sup>1</sup> |       |                               |        |
|------------|-------------------------------|-------|------|------|-------|--------------------------------|--------------------------------|------|------|------|------|-------|-------|-------|-------|--|-------|-------------------------------|--------|
|            | 5-year average,<br>1917-1921. | 1917  | 1918 | 1919 | 1920  | 1921                           | 10-year average,<br>1912-1921. | 1912 | 1913 | 1914 | 1915 | 1916  | 1917  | 1918  | 1919  | 1920                                   | 1921  | 5-year average,<br>1916-1920. | 1921   |
| Me....     | 204                           | 125   | 200  | 280  | 177   | 288                            | 95                             | 55   | 53   | 33   | 70   | 142   | 130   | 120   | 140   | 125                                    | 85    | 247.09                        | 244.80 |
| N. H....   | 127                           | 107   | 140  | 102  | 127   | 160                            | 124                            | 61   | 53   | 60   | 95   | 166   | 167   | 145   | 175   | 155                                    | 135   | 191.25                        | 216.00 |
| Vt....     | 122                           | 100   | 130  | 100  | 130   | 150                            | 106                            | 55   | 72   | 47   | 81   | 139   | 140   | 138   | 157   | 125                                    | 104   | 153.92                        | 156.00 |
| Mass....   | 116                           | 115   | 133  | 90   | 125   | 115                            | 134                            | 75   | 85   | 71   | 94   | 175   | 175   | 170   | 190   | 150                                    | 152   | 189.02                        | 174.80 |
| R. I....   | 113                           | 135   | 130  | 100  | 110   | 115                            | 136                            | 77   | 90   | 70   | 92   | 185   | 175   | 173   | 180   | 160                                    | 160   | 190.81                        | 184.00 |
| Conn....   | 100                           | 110   | 95   | 75   | 115   | 103                            | 132                            | 78   | 87   | 65   | 96   | 175   | 164   | 165   | 195   | 150                                    | 150   | 164.43                        | 154.50 |
| N. Y....   | 106                           | 95    | 98   | 109  | 125   | 102                            | 104                            | 58   | 80   | 44   | 82   | 158   | 130   | 122   | 145   | 118                                    | 108   | 131.84                        | 111.24 |
| N. J....   | 111                           | 114   | 92   | 96   | 156   | 95                             | 119                            | 66   | 82   | 61   | 75   | 155   | 141   | 170   | 169   | 125                                    | 142   | 172.70                        | 134.90 |
| Pa....     | 95                            | 92    | 80   | 100  | 115   | 86                             | 112                            | 57   | 80   | 58   | 75   | 148   | 135   | 151   | 154   | 124                                    | 133   | 139.04                        | 114.38 |
| Del....    | 84                            | 95    | 87   | 83   | 106   | 50                             | 102                            | 70   | 75   | 70   | 75   | 125   | 130   | 140   | 125   | 100                                    | 110   | 113.51                        | 55.00  |
| Md....     | 88                            | 100   | 80   | 94   | 102   | 65                             | 95                             | 58   | 67   | 60   | 62   | 133   | 119   | 120   | 130   | 95                                     | 110   | 112.09                        | 71.50  |
| Va....     | 107                           | 99    | 94   | 114  | 120   | 108                            | 103                            | 65   | 80   | 77   | 61   | 137   | 125   | 120   | 157   | 95                                     | 110   | 141.53                        | 113.80 |
| W. Va....  | 99                            | 115   | 87   | 100  | 120   | 85                             | 122                            | 62   | 90   | 81   | 65   | 153   | 132   | 160   | 175   | 135                                    | 163   | 149.91                        | 133.55 |
| N. C....   | 89                            | 90    | 95   | 80   | 91    | 88                             | 119                            | 76   | 82   | 92   | 73   | 140   | 143   | 135   | 163   | 142                                    | 143   | 129.91                        | 125.84 |
| S. C....   | 94                            | 96    | 102  | 55   | 100   | 85                             | 159                            | 112  | 130  | 125  | 115  | 175   | 210   | 193   | 200   | 180                                    | 150   | 175.94                        | 127.50 |
| Ga....     | 75                            | 84    | 70   | 70   | 74    | 75                             | 154                            | 87   | 105  | 105  | 99   | 175   | 195   | 185   | 217   | 208                                    | 165   | 140.82                        | 123.75 |
| Fla....    | 93                            | 91    | 100  | 76   | 105   | 92                             | 163                            | 110  | 117  | 113  | 115  | 200   | 205   | 200   | 210   | 200                                    | 190   | 180.83                        | 174.80 |
| Ohio....   | 78                            | 100   | 69   | 61   | 100   | 85                             | 122                            | 53   | 85   | 53   | 70   | 182   | 143   | 150   | 192   | 135                                    | 155   | 116.10                        | 89.90  |
| Ind....    | 73                            | 92    | 80   | 44   | 96    | 51                             | 117                            | 50   | 84   | 56   | 56   | 177   | 139   | 135   | 195   | 133                                    | 145   | 105.45                        | 73.95  |
| Ill....    | 66                            | 90    | 72   | 52   | 65    | 53                             | 123                            | 60   | 89   | 61   | 59   | 179   | 152   | 148   | 196   | 145                                    | 140   | 103.67                        | 74.20  |
| Mich....   | 91                            | 95    | 84   | 90   | 105   | 80                             | 88                             | 41   | 53   | 30   | 56   | 160   | 105   | 89    | 135   | 92                                     | 95    | 93.88                         | 76.00  |
| Wis....    | 99                            | 114   | 110  | 94   | 108   | 68                             | 80                             | 34   | 54   | 30   | 45   | 147   | 90    | 80    | 140   | 86                                     | 95    | 90.83                         | 64.60  |
| Minn....   | 96                            | 112   | 105  | 87   | 99    | 75                             | 77                             | 28   | 52   | 32   | 39   | 130   | 91    | 75    | 153   | 80                                     | 90    | 94.30                         | 67.50  |
| Iowa....   | 73                            | 95    | 72   | 46   | 110   | 43                             | 113                            | 46   | 82   | 59   | 54   | 175   | 131   | 123   | 192   | 122                                    | 140   | 103.25                        | 60.20  |
| Mo....     | 73                            | 87    | 61   | 75   | 82    | 58                             | 124                            | 69   | 93   | 78   | 60   | 180   | 137   | 153   | 184   | 151                                    | 135   | 116.47                        | 73.30  |
| N. D....   | 76                            | 43    | 99   | 63   | 79    | 96                             | 81                             | 28   | 56   | 42   | 41   | 115   | 130   | 73    | 160   | 96                                     | 70    | 82.67                         | 67.20  |
| S. D....   | 78                            | 90    | 91   | 50   | 106   | 55                             | 92                             | 36   | 63   | 47   | 35   | 137   | 111   | 93    | 190   | 97                                     | 107   | 94.55                         | 58.85  |
| Nebr....   | 81                            | 85    | 96   | 55   | 99    | 80                             | 103                            | 51   | 78   | 54   | 42   | 150   | 107   | 118   | 190   | 120                                    | 120   | 105.05                        | 96.00  |
| Kans....   | 67                            | 57    | 53   | 76   | 85    | 64                             | 125                            | 73   | 91   | 77   | 74   | 165   | 152   | 144   | 190   | 150                                    | 135   | 110.40                        | 86.40  |
| Ky....     | 81                            | 96    | 75   | 70   | 99    | 65                             | 128                            | 67   | 102  | 84   | 55   | 142   | 140   | 165   | 210   | 150                                    | 165   | 134.59                        | 107.25 |
| Tenn....   | 73                            | 94    | 70   | 67   | 83    | 52                             | 126                            | 70   | 97   | 91   | 63   | 149   | 126   | 165   | 172   | 160                                    | 165   | 120.83                        | 85.80  |
| Ala....    | 75                            | 72    | 80   | 80   | 67    | 75                             | 150                            | 90   | 105  | 101  | 90   | 169   | 182   | 181   | 215   | 200                                    | 170   | 146.79                        | 127.50 |
| Miss....   | 80                            | 78    | 80   | 85   | 87    | 68                             | 145                            | 90   | 100  | 95   | 84   | 160   | 168   | 165   | 185   | 200                                    | 200   | 139.66                        | 136.00 |
| La....     | 68                            | 64    | 79   | 64   | 65    | 67                             | 143                            | 53   | 96   | 97   | 95   | 167   | 184   | 150   | 220   | 203                                    | 180   | 123.51                        | 120.60 |
| Tex....    | 59                            | 60    | 55   | 73   | 52    | 56                             | 165                            | 105  | 112  | 104  | 105  | 190   | 210   | 200   | 210   | 220                                    | 190   | 119.74                        | 106.40 |
| Okla....   | 62                            | 69    | 34   | 75   | 74    | 58                             | 151                            | 93   | 105  | 90   | 84   | 195   | 180   | 195   | 205   | 180                                    | 185   | 116.16                        | 107.30 |
| Ark....    | 67                            | 80    | 50   | 73   | 78    | 55                             | 146                            | 92   | 100  | 97   | 76   | 190   | 157   | 184   | 203   | 175                                    | 180   | 126.45                        | 99.00  |
| Mont....   | 103                           | 95    | 135  | 60   | 110   | 115                            | 87                             | 40   | 87   | 64   | 50   | 120   | 102   | 80    | 160   | 105                                    | 80    | 113.28                        | 82.00  |
| Wyo....    | 124                           | 155   | 150  | 80   | 125   | 105                            | 100                            | 60   | 65   | 70   | 60   | 123   | 104   | 85    | 190   | 120                                    | 118   | 151.42                        | 127.44 |
| Colo....   | 133                           | 160   | 160  | 115  | 180   | 123                            | 86                             | 41   | 65   | 50   | 55   | 135   | 91    | 99    | 170   | 80                                     | 73    | 157.96                        | 89.79  |
| N. Mex.... | 85                            | 116   | 100  | 58   | 75    | 74                             | 148                            | 65   | 140  | 95   | 95   | 175   | 165   | 160   | 190   | 210                                    | 180   | 159.52                        | 133.20 |
| Ariz....   | 93                            | 105   | 85   | 70   | 90    | 115                            | 154                            | 125  | 135  | 120  | 100  | 180   | 150   | 205   | 195   | 190                                    | 140   | 169.25                        | 161.00 |
| Utah....   | 171                           | 189   | 180  | 136  | 189   | 161                            | 84                             | 49   | 58   | 60   | 63   | 130   | 78    | 97    | 137   | 80                                     | 85    | 178.71                        | 136.85 |
| Nev....    | 159                           | 207   | 171  | 135  | 135   | 148                            | 107                            | 60   | 68   | 70   | 70   | 180   | 120   | 123   | 150   | 156                                    | 120   | 223.77                        | 177.60 |
| Idaho....  | 172                           | 156   | 185  | 155  | 180   | 185                            | 77                             | 29   | 50   | 48   | 56   | 127   | 79    | 81    | 151   | 68                                     | 77    | 164.01                        | 122.45 |
| Wash....   | 134                           | 125   | 132  | 125  | 155   | 135                            | 83                             | 36   | 60   | 55   | 53   | 98    | 92    | 101   | 145   | 95                                     | 99    | 147.70                        | 133.65 |
| Oreg....   | 105                           | 108   | 110  | 94   | 130   | 90                             | 82                             | 31   | 58   | 60   | 60   | 90    | 80    | 100   | 150   | 80                                     | 109   | 115.28                        | 98.10  |
| Calif....  | 139                           | 145   | 143  | 130  | 140   | 138                            | 114                            | 65   | 70   | 70   | 75   | 140   | 150   | 120   | 171   | 150                                    | 130   | 203.76                        | 176.80 |
| U. S....   | 97.8                          | 100.8 | 95.9 | 91.2 | 110.3 | 90.9                           | 100.3                          | 50.5 | 63.7 | 48.7 | 61.7 | 146.1 | 122.8 | 119.3 | 159.5 | 114.5                                  | 111.1 | 125.50                        | 100.97 |

<sup>1</sup> Based upon farm price Dec. 1.

## POTATOES—Continued.

TABLE 122.—Potatoes: Farm price, cents per bushel on 1st of each month, 1908-1921.

| Year.                  | Jan.<br>1. | Feb.<br>1. | Mar.<br>1. | Apr.<br>1. | May<br>1. | June<br>1. | July<br>1. | Aug.<br>1. | Sept.<br>1. | Oct.<br>1. | Nov.<br>1. | Dec.<br>1. | Yearly<br>aver. |
|------------------------|------------|------------|------------|------------|-----------|------------|------------|------------|-------------|------------|------------|------------|-----------------|
| 1908.....              | 63.4       | 66.0       | 69.0       | 70.4       | 73.3      | 71.3       | 77.8       | 83.6       | 78.0        | 74.8       | 69.2       | 70.6       | 72.1            |
| 1909.....              | 72.0       | 73.3       | 80.0       | 83.3       | 97.3      | 97.7       | 91.0       | 85.1       | 71.5        | 64.3       | 57.8       | 54.1       | 70.8            |
| 1910.....              | 58.0       | 58.2       | 54.6       | 47.4       | 38.4      | 37.4       | 40.1       | 64.9       | 72.9        | 67.8       | 55.7       | 55.7       | 56.4            |
| 1911.....              | 54.1       | 55.1       | 55.3       | 55.5       | 62.5      | 63.3       | 96.3       | 135.0      | 113.7       | 88.3       | 76.3       | 79.9       | 80.6            |
| 1912.....              | 84.5       | 94.4       | 102.0      | 117.1      | 127.3     | 119.7      | 103.6      | 86.5       | 65.0        | 51.1       | 45.5       | 50.5       | 72.9            |
| 1913.....              | 50.6       | 53.1       | 52.0       | 50.3       | 43.2      | 55.2       | 49.8       | 69.2       | 75.3        | 73.9       | 69.0       | 68.7       | 64.3            |
| 1914.....              | 68.4       | 69.7       | 70.7       | 70.0       | 71.4      | 71.3       | 81.5       | 87.1       | 74.9        | 64.7       | 52.8       | 48.7       | 64.4            |
| 1915.....              | 49.7       | 50.4       | 50.4       | 47.8       | 50.5      | 50.8       | 52.1       | 56.3       | 50.5        | 48.8       | 60.8       | 61.7       | 54.4            |
| 1916.....              | 70.6       | 88.0       | 94.4       | 97.6       | 94.8      | 98.8       | 102.3      | 95.4       | 109.3       | 112.0      | 135.7      | 146.1      | 114.1           |
| 1917.....              | 147.3      | 172.4      | 240.7      | 234.7      | 279.6     | 274.0      | 247.9      | 170.8      | 139.1       | 122.1      | 127.8      | 122.8      | 164.9           |
| 1918.....              | 121.0      | 122.9      | 120.3      | 92.6       | 50.1      | 75.5       | 94.9       | 141.6      | 148.8       | 143.6      | 127.2      | 119.3      | 121.8           |
| 1919.....              | 116.1      | 114.4      | 109.4      | 105.4      | 118.9     | 121.4      | 128.4      | 192.8      | 187.5       | 164.2      | 152.8      | 159.5      | 148.2           |
| 1920.....              | 178.6      | 217.6      | 243.5      | 295.6      | 393.6     | 421.3      | 385.0      | 302.9      | 184.9       | 134.8      | 118.3      | 114.5      | 202.2           |
| 1921.....              | 105.6      | 95.6       | 84.0       | 77.8       | 68.0      | 67.1       | 69.9       | 136.9      | 168.6       | 137.6      | 123.5      | 111.1      | 114.2           |
| Average 1912-1921..... | 99.2       | 107.8      | 116.7      | 118.9      | 133.2     | 135.5      | 131.6      | 134.0      | 120.4       | 105.3      | 101.4      | 100.3      | 112.1           |

TABLE 123.—Potatoes: Extent and causes of yearly losses, 1909-1920.

| Year.        | Deficient<br>mols-<br>ture. | Excessive<br>mols-<br>ture. | Floods.       | Frost or freeze. | Hail.         | Hot winds.    | Storms.       | Total climatic. | Plant disease. | Insect pests. | Animal pests. | Defective seed. | Total.         |
|--------------|-----------------------------|-----------------------------|---------------|------------------|---------------|---------------|---------------|-----------------|----------------|---------------|---------------|-----------------|----------------|
| 1920.....    | P. ct.<br>6.7               | P. ct.<br>2.2               | P. ct.<br>0.3 | P. ct.<br>0.6    | P. ct.<br>0.2 | P. ct.<br>0.2 | P. ct.<br>(1) | P. ct.<br>10.2  | P. ct.<br>8.1  | P. ct.<br>2.8 | P. ct.<br>0.1 | P. ct.<br>0.2   | P. ct.<br>21.3 |
| 1919.....    | 16.3                        | 5.0                         | .4            | .7               | .1            | .7            | (1)           | 23.6            | 8.8            | 4.7           | (1)           | .3              | 38.1           |
| 1918.....    | 14.7                        | 1.0                         | .2            | 1.5              | .1            | .6            | (1)           | 18.4            | 5.3            | 3.3           | (1)           | .2              | 28.3           |
| 1917.....    | 8.8                         | 3.5                         | .2            | 3.0              | .2            | .3            | (1)           | 16.3            | 4.1            | 2.4           | (1)           | .1              | 23.8           |
| 1916.....    | 19.7                        | 6.5                         | .4            | 1.9              | .2            | 1.4           | .1            | 31.5            | 5.6            | 4.5           | (1)           | .2              | 43.6           |
| 1915.....    | 12.2                        | 8.7                         | .5            | 2.2              | .1            | .1            | (1)           | 14.0            | 13.0           | 2.4           | (1)           | .1              | 30.4           |
| 1914.....    | 10.2                        | 2.1                         | .1            | .8               | .1            | .4            | (1)           | 14.0            | 1.7            | 3.3           | (1)           | .3              | 21.2           |
| 1913.....    | 20.8                        | 1.6                         | .2            | 2.0              | .1            | .7            | (1)           | 26.0            | 1.7            | 3.9           | .1            | .5              | 34.5           |
| 1912.....    | 5.3                         | 3.3                         | .4            | .6               | .1            | .2            | .1            | 10.5            | 5.8            | 3.9           | .2            | .3              | 21.7           |
| 1911.....    | 25.8                        | 2.0                         | (1)           | 1.9              | .1            | 3.2           | (1)           | 33.5            | 2.7            | 2.6           | .1            | .6              | 42.4           |
| 1910.....    | 15.4                        | 1.7                         | .2            | 1.1              | .1            | .3            | (1)           | 19.2            | 3.9            | 5.0           | .1            | .4              | 29.8           |
| 1909.....    | 11.3                        | 2.8                         | .3            | 1.8              | .2            | .2            | (1)           | 16.7            | 1.7            | 1.7           | .1            | .2              | 21.3           |
| Average..... | 13.4                        | 3.4                         | .3            | 1.5              | .1            | .7            | (1)           | 19.5            | 5.2            | 3.4           | .1            | .2              | 29.7           |

1 Less than 0.05 per cent.

99912°—YBK 1921—38



## POTATOES—Continued.

TABLE 124.—Potatoes: Stocks on January 1.

| State and year.             | Total production, bushels ('000 omitted). | Stocks Jan. 1.    |                         |                            |           | Price, cents per bushel. |         |
|-----------------------------|---|-------------------|-------------------------|----------------------------|-----------|--------------------------|---------|
|                             |   | Per cent of crop. | Bushels ('000 omitted). | Per cent of stock held by— |           | Dec. 1.                  | Mar. 1. |
|                             |   |                   |                         | Grow-ers.                  | Deal-ers. |                          |         |
| Total United States:        |   |                   |                         |                            |           |                          |         |
| 1915-16                     | 359,721                                   | 42.4              | 152,554                 | .....                      | .....     | 61.7                     | 94.4    |
| 1916-17                     | 236,953                                   | 32.3              | 92,308                  | .....                      | .....     | 146.1                    | 260.7   |
| 1917-18                     | 442,103                                   | 36.2              | 204,314                 | 84.5                       | 15.2      | 122.8                    | 120.3   |
| 1918-19                     | 411,890                                   | 42.5              | 174,973                 | 82.6                       | 17.4      | 119.3                    | 106.4   |
| 1919-20                     | 322,967                                   | 35.8              | 115,714                 | 76.9                       | 23.1      | 159.5                    | 233.5   |
| 1920-21                     | 403,206                                   | 33.6              | 135,603                 | 85.3                       | 14.7      | 114.5                    | 84.0    |
| 1921-22                     | 346,823                                   | 40.7              | 141,042                 | 77.6                       | 22.4      | 111.1                    | .....   |
| Total (21 Northern States): |   |                   |                         |                            |           |                          |         |
| 1915-16                     | 254,235                                   | 43.6              | 110,810                 | 79.5                       | 20.5      | 60                       | 93      |
| 1916-17                     | 183,281                                   | 33.1              | 60,603                  | 74.9                       | 25.1      | 152                      | 252     |
| 1917-18                     | 308,899                                   | 49.6              | 150,666                 | 84.6                       | 15.4      | 122                      | 116     |
| 1918-19                     | 281,060                                   | 43.5              | 122,261                 | 82.4                       | 17.6      | 115                      | 102     |
| 1919-20                     | 230,025                                   | 36.4              | 83,729                  | 79.5                       | 20.5      | 167                      | 286     |
| 1920-21                     | 289,501                                   | 34.7              | 100,457                 | 86.3                       | 13.7      | 113                      | 94      |
| 1921-22                     | 243,772                                   | 42.8              | 104,229                 | 74.0                       | 26.0      | 107                      | .....   |
| Total (11 Far West States): |   |                   |                         |                            |           |                          |         |
| 1915-16                     | 48,776                                    | 53.9              | 26,312                  | 80.6                       | 19.4      | 61                       | 104     |
| 1916-17                     | 54,081                                    | 44.6              | 24,140                  | 71.0                       | 29.0      | 120                      | 238     |
| 1917-18                     | 70,779                                    | 46.3              | 32,748                  | 86.8                       | 13.2      | 105                      | 88      |
| 1918-19                     | 66,630                                    | 48.0              | 31,982                  | 85.3                       | 14.7      | 101                      | 89      |
| 1919-20                     | 41,369                                    | 43.1              | 17,830                  | 71.6                       | 28.4      | 162                      | 266     |
| 1920-21                     | 51,694                                    | 41.8              | 21,668                  | 82.6                       | 17.4      | 104                      | 84      |
| 1921-22                     | 53,849                                    | 48.3              | 26,028                  | 82.0                       | 18.0      | 96                       | .....   |
| Total (16 Southern States): |   |                   |                         |                            |           |                          |         |
| 1915-16                     | 56,710                                    | 27.2              | 15,432                  | 82.1                       | 17.9      | 70                       | 86      |
| 1916-17                     | 49,591                                    | 16.3              | 8,065                   | 68.8                       | 31.2      | 151                      | 204     |
| 1917-18                     | 67,430                                    | 31.0              | 20,900                  | 82.8                       | 17.2      | 147                      | 171     |
| 1918-19                     | 64,170                                    | 32.3              | 20,730                  | 79.5                       | 20.5      | 157                      | 161     |
| 1919-20                     | 51,473                                    | 27.5              | 14,155                  | 69.1                       | 30.9      | 181                      | 262     |
| 1920-21                     | 62,101                                    | 21.8              | 13,538                  | 82.1                       | 17.9      | 146                      | 155     |
| 1921-22                     | 49,202                                    | 21.9              | 10,735                  | 80.5                       | 19.5      | 147                      | .....   |
| Maine:                      |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 21,771                                    | 55.0              | 11,974                  | 88.0                       | 12.0      | 125                      | 56      |
| 1921-22                     | 37,152                                    | 55.0              | 20,494                  | 80.7                       | 19.3      | 85                       | .....   |
| New York:                   |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 40,625                                    | 47.0              | 19,094                  | 91.0                       | 9.0       | 118                      | 63      |
| 1921-22                     | 34,990                                    | 42.7              | 14,514                  | 91.5                       | 8.5       | 108                      | .....   |
| Pennsylvania:               |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 28,200                                    | 36.0              | 9,396                   | .....                      | .....     | 124                      | 78      |
| 1921-22                     | 21,586                                    | 33.6              | 7,253                   | 81.0                       | 19.0      | 133                      | .....   |
| Ohio:                       |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 11,600                                    | 21.0              | 2,436                   | 86.0                       | 14.0      | 135                      | 106     |
| 1921-22                     | 6,728                                     | 30.9              | 2,079                   | 80.5                       | 19.5      | 155                      | .....   |
| Indiana:                    |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 6,528                                     | 12.0              | 753                     | 72.0                       | 28.0      | 133                      | 99      |
| 1921-22                     | 3,570                                     | 32.7              | 1,167                   | 68.3                       | 31.7      | 145                      | .....   |
| Illinois:                   |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 7,930                                     | 12.0              | 952                     | 75.0                       | 25.0      | 145                      | 117     |
| 1921-22                     | 6,413                                     | 36.2              | 2,322                   | 76.3                       | 23.7      | 140                      | .....   |
| Michigan:                   |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 36,225                                    | 45.0              | 16,301                  | 83.0                       | 17.0      | 92                       | 52      |
| 1921-22                     | 27,200                                    | 47.1              | 12,811                  | 81.0                       | 19.0      | 95                       | .....   |
| Wisconsin:                  |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 33,284                                    | 48.0              | 15,967                  | 88.0                       | 12.0      | 86                       | 62      |
| 1921-22                     | 21,420                                    | 64.2              | 13,752                  | 74.0                       | 26.0      | 95                       | .....   |
| Minnesota:                  |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 31,581                                    | 27.0              | 11,685                  | 80.0                       | 20.0      | 80                       | 54      |
| 1921-22                     | 27,525                                    | 42.5              | 11,698                  | 73.4                       | 26.6      | 90                       | .....   |
| North Dakota:               |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 6,567                                     | 20.0              | 1,311                   | 62.0                       | 38.0      | 98                       | 91      |
| 1921-22                     | 11,520                                    | 26.2              | 2,903                   | 63.2                       | 36.8      | 70                       | .....   |
| Nebraska:                   |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 8,415                                     | 28.0              | 2,356                   | 85.0                       | 15.0      | 120                      | 106     |
| 1921-22                     | 8,160                                     | 44.0              | 3,590                   | 73.0                       | 27.0      | 120                      | .....   |
| Kentucky:                   |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 5,643                                     | 29.0              | 1,636                   | 66.0                       | 34.0      | 150                      | 120     |
| 1921-22                     | 3,770                                     | 43.3              | 1,632                   | 100.0                      | 0.0       | 165                      | .....   |
| Colorado:                   |   |                   |                         |                            |           |                          |         |
| 1920-21                     | 9,490                                     | 41.0              | 3,891                   | 92.0                       | 8.0       | 80                       | 53      |
| 1921-22                     | 11,070                                    | 53.9              | 6,520                   | 90.3                       | 9.7       | 73                       | .....   |

POTATOES—Continue.

TABLE 125.—Potatoes: Wholesale price, 1918-1921.

| Date.          | New York State and western (per 100 pounds). |        |        | Chicago, fair to fancy (per 100 pounds). |        |        | Minneapolis (per 100 pounds). |        |        | St. Louis, Burbank (per 100 pounds). |        |        | Cincinnati (per 150 pounds). |        |        | Denver (per 150 pounds). |        |        | San Francisco (per 100 pounds). |        |        |
|----------------|--|--------|--------|--|--------|--------|-------------------------------|--------|--------|--------------------------------------|--------|--------|------------------------------|--------|--------|--------------------------|--------|--------|---------------------------------|--------|--------|
|                | Low.   | High.  | Aver.  | Low.                                     | High.  | Aver.  | Low.                          | High.  | Aver.  | Low.                                 | High.  | Aver.  | Low.                         | High.  | Aver.  | Low.                     | High.  | Aver.  | Low.                            | High.  | Aver.  |
| 1921.          |  |        |        |  |        |        |                               |        |        |                                      |        |        |                              |        |        |                          |        |        |                                 |        |        |
| January.....   | \$3.00                                       | \$4.25 | \$3.47 | \$1.00                                   | \$1.90 | \$1.31 | \$1.00                        | \$1.80 | \$1.70 | \$1.05                               | \$2.25 | \$1.03 | \$2.00                       | \$3.00 | \$2.74 | \$1.50                   | \$2.00 | \$1.71 | \$1.00                          | \$2.25 | \$1.09 |
| February.....  | 2.00   | 3.50   | 2.74   | .95                                      | 1.40   | 1.18   | 1.15                          | 1.50   | 1.32   | 1.15                                 | 2.25   | 1.40   | 2.35                         | 2.50   | 2.42   | 1.00                     | 2.00   | 1.65   | 1.25                            | 2.10   | 1.70   |
| March.....     | 2.00   | 3.25   | 2.63   | .95                                      | 2.40   | 1.33   | 1.20                          | 1.20   | 1.20   | 1.15                                 | 2.75   | 1.70   | 2.00                         | 2.50   | 2.34   | 1.00                     | 1.75   | 1.40   | 1.25                            | 1.90   | 1.50   |
| April.....     | 1.50   | 3.25   | 2.45   | .70                                      | 2.40   | 1.14   | 1.00                          | 10.00  | 1.10   | 1.05                                 | 7.00   | 2.72   | 1.75                         | 2.25   | 2.10   | 1.25                     | 1.75   | 1.40   | 1.25                            | 2.25   | 2.71   |
| May.....       | 1.50   | 2.50   | 2.00   | .40                                      | 5.00   | 2.47   | 1.00                          | 8.00   | 4.00   | .85                                  | 4.75   | 2.22   | 1.75                         | 2.00   | 1.87   | 1.25                     | 2.50   | 1.09   | 1.25                            | 2.25   | 1.78   |
| June.....      | 1.00   | 2.25   | 1.78   | .50                                      | 4.00   | 1.73   | .75                           | 5.00   | 2.20   | 1.00                                 | 3.75   | 2.13   | 1.75                         | 2.00   | 1.88   | 1.50                     | 3.50   | 2.43   | 1.25                            | 2.50   | 1.95   |
| July.....      | .....  | .....  | .....  | 1.25                                     | 3.25   | 1.94   | .50                           | 3.75   | 1.64   | 1.00                                 | 2.00   | 1.70   | 1.75                         | 4.00   | 3.18   | 2.00                     | 3.25   | 2.41   | 1.25                            | 2.00   | 1.88   |
| August.....    | 2.50   | 5.00   | 4.24   | 1.25                                     | 3.40   | 2.74   | 3.75                          | 4.50   | 4.19   | 1.25                                 | 3.65   | 2.42   | 3.50                         | 5.50   | 4.45   | 2.50                     | 2.40   | 2.07   | 1.35                            | 3.00   | 2.12   |
| September..... | 3.00   | 4.75   | 3.75   | 1.25                                     | 3.00   | 2.27   | 2.75                          | 4.00   | 3.21   | 1.00                                 | 3.30   | 2.08   | 2.00                         | 5.00   | 4.10   | 1.50                     | 2.50   | 2.05   | 1.75                            | 3.50   | 2.32   |
| October.....   | 3.40   | 5.25   | 3.84   | 1.00                                     | 2.74   | 1.72   | 1.50                          | 3.25   | 2.41   | 1.15                                 | 2.90   | 2.15   | 2.00                         | 4.00   | 2.88   | 1.65                     | 2.50   | 2.05   | 1.75                            | 3.50   | 2.32   |
| November.....  | 3.25   | 5.50   | 4.39   | 1.00                                     | 2.60   | 1.72   | 1.00                          | 2.25   | 1.72   | 1.10                                 | 2.55   | 1.71   | 1.50                         | 3.75   | 2.73   | 1.05                     | 2.00   | 1.83   | 1.75                            | 3.50   | 2.64   |
| December.....  | .....  | .....  | .....  | 1.00                                     | 2.45   | 1.72   | 1.00                          | 1.65   | 1.31   | 1.25                                 | 2.35   | 1.85   | 1.50                         | 3.75   | 2.45   | 1.50                     | 2.00   | 1.08   | 1.50                            | 3.50   | 1.98   |
| 1920.          | 1.00   | 5.50   | 3.13   | .40                                      | 5.00   | 1.85   | .50                           | 10.00  | 2.18   | .75                                  | 7.00   | 2.02   | 1.50                         | 5.50   | 2.70   | 1.00                     | 3.50   | 1.93   | 1.00                            | 7.00   | 1.99   |
| 1919.          | .....  | .....  | .....  | 1.20                                     | 12.00  | 4.64   | 1.60                          | 12.00  | 4.65   | 1.00                                 | 14.00  | .....  | 2.00                         | 13.00  | 7.09   | 1.50                     | 13.00  | .....  | 1.00                            | 10.00  | 4.10   |
| 1918.          | 1.00   | 7.25   | 3.84   | .85                                      | 5.50   | 2.39   | 1.40                          | 4.50   | 2.38   | 1.25                                 | 4.50   | .....  | 1.25                         | 7.50   | 4.04   | 1.40                     | 7.00   | .....  | 1.50                            | 4.25   | 2.18   |
| 1917.          | 1.00   | 3.33   | 2.08   | .45                                      | 3.50   | 1.85   | .80                           | 3.25   | 1.80   | .80                                  | 2.85   | .....  | .....                        | .....  | .....  | .75                      | 3.50   | .....  | 1.00                            | 2.75   | .....  |
| 1916.          | 3.00   | 11.00  | .....  | .90                                      | 4.50   | .....  | .90                           | 4.20   | .....  | .87                                  | 3.35   | .....  | 1.10                         | 3.30   | .....  | 2.00                     | 0.50   | .....  | 1.25                            | 5.00   | .....  |
| 1915.          | 2.85   | 5.25   | .....  | .60                                      | 2.00   | .....  | .62                           | 1.75   | .....  | .60                                  | 2.10   | .....  | .65                          | .90    | .....  | 1.40                     | 1.00   | .....  | .85                             | 2.50   | .....  |
| 1914.          | 1.00   | 3.00   | .....  | .17                                      | 1.50   | .....  | .23                           | 1.50   | .....  | .92                                  | 1.40   | .....  | .30                          | .90    | .....  | .60                      | 2.25   | .....  | .85                             | 2.50   | .....  |
| 1913.          | 1.25   | 3.00   | .....  | .23                                      | 1.75   | .....  | .23                           | 1.50   | .....  | .43                                  | 1.40   | .....  | .45                          | 1.70   | .....  | .60                      | 2.75   | .....  | .60                             | 3.50   | .....  |
| 1912.          | 1.70   | 2.87   | .....  | .15                                      | .82    | .....  | .33                           | 1.00   | .....  | .30                                  | .98    | .....  | .30                          | 1.00   | .....  | .60                      | 4.00   | .....  | .20                             | 1.60   | .....  |

## POTATOES—Continued.

TABLE 126.—Potatoes: International trade, calendar years 1911-1920.

GENERAL NOTE.—Substantially the international trade of the world. It should not be expected that the world export and import totals for any year will agree. Among sources of disagreement are these: (1) Different periods of time covered in the "year" of the various countries; (2) imports received in year subsequent to year of export; (3) want of uniformity in classification of goods among countries; (4) differ-

errors, which, it may be assumed, are not infrequent.

The exports given are domestic exports, and the imports given are imports for consumption as far as it is feasible and consistent so to express the facts. While there are some inevitable omissions, on the other hand there are some duplications because of reshipments that do not appear as such in official reports. For the United Kingdom, import figures refer to imports for consumption, when available, otherwise total imports, less exports, of "foreign and colonial merchandise." Figures for the United States include Alaska, Porto Rico, and Hawaii.

| Country.                              | Average,<br>1911-1913.     |                            | 1918                     |                            | 1919                     |                            | 1920                       |                            |
|---------------------------------------|----------------------------|----------------------------|--------------------------|----------------------------|--------------------------|----------------------------|----------------------------|----------------------------|
|                                       | Imports.                   | Exports.                   | Imports.                 | Exports.                   | Imports.                 | Exports.                   | Imports.                   | Exports.                   |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> |                            |                            |                          |                            |                          |                            |                            |                            |
| Belgium.....                          | 1,000<br>4,921<br>bushels. | 1,000<br>8,652<br>bushels. | 1,000<br>728<br>bushels. | 1,000<br>2,126<br>bushels. | 1,000<br>136<br>bushels. | 1,000<br>3,833<br>bushels. | 1,000<br>1,514<br>bushels. | 1,000<br>2,871<br>bushels. |
| Canada.....                           | 525                        | 1,207                      | 728                      | 2,126                      | 616                      | 6,151                      | 923                        | 5,583                      |
| China.....                            | 36                         | 1,283                      | ( <sup>1</sup> )         | 1,703                      | ( <sup>1</sup> )         | 205                        | 30                         | 192                        |
| Denmark.....                          | 40                         | 928                        | ( <sup>1</sup> )         | 1,703                      | ( <sup>1</sup> )         | 4,610                      | 30                         | 7,854                      |
| France.....                           | 7,143                      | 8,653                      | 1,153                    | 630                        | 11,691                   | 1,327                      | 2,465                      | 7,903                      |
| Italy.....                            | 242                        | 3,975                      | ( <sup>1</sup> )         | 143                        | 30                       | 565                        | 1                          | 3,074                      |
| Japan.....                            | 1,952                      | 440                        | 1                        | 325                        | 108                      | 370                        | 44                         | 323                        |
| Netherlands.....                      | 16,451                     | 16,451                     | 465                      | 465                        | 108                      | 13,549                     | 44                         | 14,424                     |
| Portugal.....                         | 273                        | 500                        | 20                       | 16                         | 578                      | 18                         |                            |                            |
| Russia.....                           | 309                        | 7,762                      |                          |                            |                          |                            |                            |                            |
| Spain.....                            | 1,535                      | 1,535                      | 634                      |                            |                          | 275                        |                            | 326                        |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                            |                            |                          |                            |                          |                            |                            |                            |
| Algeria.....                          | 1,218                      | 931                        | 373                      | 4                          | 539                      | 289                        | 1,630                      | 472                        |
| Argentina.....                        | 1,337                      | 543                        | 35                       | 572                        | 81                       | 1,024                      |                            |                            |
| Austria-Hungary.....                  | 4,070                      | 1,451                      |                          |                            |                          |                            |                            |                            |
| Brazil.....                           | 939                        | ( <sup>1</sup> )           | 16                       | 191                        | 43                       | 14                         | 276                        | ( <sup>1</sup> )           |
| Cuba.....                             | 2,001                      | 2                          | 3,378                    |                            | 3,266                    |                            |                            |                            |
| Egypt.....                            | 599                        | 28                         | 5                        | ( <sup>1</sup> )           | 163                      | 1                          | 786                        | ( <sup>1</sup> )           |
| Finland.....                          | 479                        | 15                         | 264                      |                            | 1,237                    |                            | 172                        |                            |
| Germany.....                          | 29,180                     | 12,412                     |                          |                            |                          |                            | 26,852                     | 2,109                      |
| Norway.....                           | 215                        | 60                         | 412                      | ( <sup>1</sup> )           | 245                      | 46                         | 96                         | 568                        |
| Philippine Islands.....               | 334                        |                            | 239                      |                            | 289                      |                            | 291                        |                            |
| Sweden.....                           | 700                        | 64                         | 1,256                    | ( <sup>1</sup> )           | 732                      | 623                        | 204                        |                            |
| Switzerland.....                      | 3,172                      | 42                         | 140                      | 2                          | 94                       | 774                        | 456                        | 584                        |
| United Kingdom.....                   | 11,382                     | 6,246                      | 1,896                    | 2,532                      | 1,846                    | 13,276                     | 9,719                      | 890                        |
| United States.....                    | 5,707                      | 1,814                      | 1,201                    | 3,853                      | 5,544                    | 3,612                      | 6,062                      | 4,154                      |
| Other countries.....                  | 1,993                      | 782                        | 1,476                    | 4,938                      | 468                      | 494                        | 1,176                      | 374                        |
| Total.....                            | 78,787                     | 75,151                     | 12,693                   | 18,288                     | 27,706                   | 51,026                     | 52,697                     | 51,106                     |

<sup>1</sup> Less than 500 bushels.

<sup>2</sup> One year average.

TABLE 127.—Potatoes: Monthly average jobbing prices per 100 pounds at 10 markets, 1921.

| Market.           | January. | February. | March. | April. | May.   | June.  | July.  | August. | September. | October. | November. | December. |
|-------------------|----------|-----------|--------|--------|--------|--------|--------|---------|------------|----------|-----------|-----------|
| New York.....     | \$1.80   | \$1.31    | \$1.51 | \$4.41 | \$4.18 | \$1.90 | \$2.23 | \$2.90  | \$2.11     | \$2.09   | \$1.92    | \$2.07    |
| Chicago.....      | 1.29     | 1.15      | 1.25   | 4.83   | 4.50   | 2.42   | 2.33   | 3.11    | 2.65       | 2.00     | 1.75      | 1.83      |
| Philadelphia..... | 1.65     | 1.20      | 1.07   | 3.96   | 4.14   | 1.93   | 2.11   | 3.07    | 2.41       | 2.19     | 2.01      | 2.00      |
| Pittsburgh.....   | .60      | 1.36      | 1.48   | 4.50   | 4.37   | 2.28   | 2.73   | 3.43    | 2.71       | 2.30     | 2.10      | 2.01      |
| St. Louis.....    | 1.58     | 1.39      | 1.48   | 5.76   | 3.49   | 2.77   | 2.84   | 3.16    | 2.83       | 2.23     | 1.89      | 1.93      |
| Cincinnati.....   | 1.68     | 1.58      | 1.77   | 4.12   | 4.10   | 2.49   | 2.65   | 3.52    | 2.96       | 2.46     | 1.93      | 1.97      |
| St. Paul.....     |          |           |        |        |        | 3.06   | 3.05   | 3.49    |            |          |           |           |
| Minneapolis.....  |          |           |        |        |        | 3.05   | 2.90   | 3.43    |            |          |           |           |
| Kansas City.....  |          |           |        | 6.36   | 3.93   | 3.06   |        | 3.09    | 2.63       | 1.97     | 1.51      | 1.65      |
| Washington.....   | 2.12     | 1.69      | 1.71   | 4.73   | 4.32   | 2.11   | 2.39   | 3.27    | 2.33       | 2.61     | 2.43      | 2.23      |

<sup>1</sup> Carlots sales.

<sup>2</sup> Sales direct to retailers.

POTATOES—Continued.

TABLE 128.—Potatoes: Carlot shipments, by States of origin, for 1917–1921.

| State.                     | 1917             | 1918             | 1919             | 1920             | 1921    |
|----------------------------|------------------|------------------|------------------|------------------|---------|
| Maine.....                 | 20,084           | 16,048           | 22,601           | 18,851           | 26,268  |
| New York, Long Island..... | 3,582            | 4,953            | 3,962            | 4,724            | 5,438   |
| New York, Other.....       | 2,874            | 5,651            | 7,511            | 8,100            | 15,476  |
| New Jersey.....            | 11,402           | 6,113            | 10,484           | 17,017           | 10,527  |
| Pennsylvania.....          | 2,076            | 2,691            | 3,538            | 5,038            | 5,033   |
| Maryland.....              | 2,538            | 1,144            | 1,906            | 3,024            | 2,742   |
| Virginia.....              | 20,440           | 11,942           | 12,399           | 16,210           | 19,678  |
| North Carolina.....        | 4,709            | 5,568            | 3,346            | 3,506            | 3,887   |
| South Carolina.....        | 2,440            | 2,812            | 1,217            | 3,069            | 2,501   |
| Florida.....               | 4,284            | 4,846            | 2,278            | 3,351            | 2,342   |
| Michigan.....              | 5,187            | 10,271           | 13,062           | 13,590           | 16,556  |
| Wisconsin.....             | 10,283           | 18,453           | 23,886           | 14,949           | 15,215  |
| Minnesota.....             | 12,687           | 21,920           | 24,347           | 21,605           | 25,902  |
| Iowa.....                  | 440              | 934              | ( <sup>1</sup> ) | 894              | 131     |
| North Dakota.....          | ( <sup>1</sup> ) | 1,628            | 2,917            | 1,595            | 9,129   |
| South Dakota.....          | 966              | 1,223            | 757              | 1,547            | 3,297   |
| Nebraska.....              | 1,520            | 3,163            | 2,534            | 2,510            | 4,516   |
| Kansas.....                | 837              | 824              | 1,133            | 1,974            | 2,389   |
| Kentucky.....              | 717              | 691              | 963              | 938              | 840     |
| Alabama.....               | 633              | 586              | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 695     |
| Louisiana.....             | 1,063            | 4,045            | 553              | 892              | 1,160   |
| Texas.....                 | 1,689            | 2,317            | 806              | 784              | 1,109   |
| Oklahoma.....              | 663              | ( <sup>1</sup> ) | 678              | 588              | 285     |
| Arkansas.....              | 339              | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 223              | 129     |
| Montana.....               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 828              | 635              | 1,446   |
| Wyoming.....               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 401              | 470              | 774     |
| Colorado.....              | 9,791            | 14,145           | 12,765           | 9,434            | 12,902  |
| Utah.....                  | 667              | 567              | 476              | 509              | 1,121   |
| Nevada.....                | 1,158            | 815              | 875              | 414              | 483     |
| Idaho.....                 | 5,830            | 7,616            | 8,859            | 6,854            | 10,756  |
| Washington.....            | 2,762            | 2,257            | 4,095            | 3,269            | 4,798   |
| Oregon.....                | 3,436            | 1,816            | 1,276            | 1,136            | 1,720   |
| California.....            | 6,570            | 10,933           | 9,081            | 9,558            | 8,805   |
| All other.....             | 2,409            | 3,292            | 1,713            | 1,611            | 1,454   |
| Total.....                 | 144,656          | 169,264          | 181,277          | 179,149          | 219,334 |

<sup>1</sup> Included in all other.

SWEET POTATOES.

TABLE 129.—Sweet potatoes: Acreage, production, and value in the United States, 1849–1921.

[See note for Table 117.]

| Year.     | Acreage<br>('000<br>omit-<br>ted). | Average<br>yield<br>per<br>acre. | Production<br>('000<br>omit-<br>ted). | Average<br>farm<br>price<br>per<br>bushel<br>Dec. 1. | Farm<br>value<br>Dec. 1<br>('000<br>omit-<br>ted). | Year.     | Acreage<br>('000<br>omit-<br>ted). | Average<br>yield<br>per<br>acre. | Production<br>('000<br>omit-<br>ted). | Average<br>farm<br>price<br>per<br>bushel<br>Dec. 1. | Farm<br>value<br>Dec. 1<br>('000<br>omit-<br>ted). |
|-----------|------------------------------------|----------------------------------|---------------------------------------|--|--|-----------|------------------------------------|----------------------------------|---------------------------------------|--|--|
| 1849..... | <i>Acres.</i>                      | <i>Bushels.</i>                  | <i>Bushels.</i>                       | <i>Cents.</i>  | <i>Dollars.</i>                                    | 1908..... | <i>Acres.</i>                      | <i>Bushels.</i>                  | <i>Bushels.</i>                       | <i>Cents.</i>  | <i>Dollars.</i>                                    |
| 1859..... |                                    |                                  | 38,268                                |  |  | 1909..... | 599                                | 92.4                             | 55,352                                | 66.1   | 36,564   |
| 1869..... |                                    |                                  | 42,095                                |  |  | 1910..... | 641                                | 90.1                             | 57,764                                | 68.5   | 39,585   |
| 1879..... |                                    |                                  | 21,710                                |  |  | 1911..... | 641                                | 93.5                             | 59,938                                | 67.1   | 40,216   |
| 1889..... |                                    |                                  | 33,379                                |  |  | 1912..... | 805                                | 90.1                             | 54,538                                | 75.5   | 41,202   |
|           |                                    |                                  | 45,650                                |  |  |           | 583                                | 95.2                             | 55,479                                | 72.6   | 40,264   |
| 1899..... | 537                                | 77.5                             | 41,593                                | 53.0   | 22,065   | 1913..... | 625                                | 94.5                             | 59,057                                | 72.6   | 42,884   |
| 1900..... | 544                                | 85.9                             | 43,346                                | 50.6   | 24,478   | 1914..... | 603                                | 93.8                             | 56,574                                | 73.0   | 41,294   |
| 1901..... | 547                                | 81.7                             | 44,697                                | 57.5   | 25,720   | 1915..... | 731                                | 103.5                            | 75,639                                | 62.1   | 46,980   |
| 1902..... | 532                                | 85.2                             | 45,344                                | 58.1   | 26,358   | 1916..... | 774                                | 91.7                             | 70,955                                | 84.8   | 60,141   |
| 1903..... | 548                                | 89.2                             | 48,870                                | 53.3   | 26,478   | 1917..... | 919                                | 91.2                             | 83,822                                | 110.8  | 92,916   |
| 1904..... | 548                                | 88.9                             | 48,705                                | 60.4   | 29,424   | 1918..... | 940                                | 93.5                             | 87,924                                | 135.2  | 118,863  |
| 1905..... | 551                                | 92.6                             | 51,034                                | 58.3   | 29,734   | 1919..... | 941                                | 103.2                            | 97,126                                | 124.4  | 120,514  |
| 1906..... | 554                                | 90.2                             | 49,948                                | 62.2   | 31,063   | 1920..... | 992                                | 104.8                            | 103,925                               | 113.4  | 117,834  |
| 1907..... | 565                                | 88.2                             | 49,813                                | 70.0   | 34,888   | 1921..... | 1,066                              | 92.6                             | 98,660                                | 88.1   | 86,910   |

## SWEET POTATOES—Continued.

TABLE 130.—Sweet potatoes: Acreage, production, and total farm value, by States, 1920 and 1921.

| State.              | Thousands of acres. |       | Production (thousands of bushels). |        | Total value, basis Dec. 1 price (thousands of dollars). |        |
|---------------------|---------------------|-------|------------------------------------|--------|---|--------|
|                     | 1920                | 1921  | 1920                               | 1921   | 1920  | 1921   |
| New Jersey.....     | 16                  | 17    | 2,288                              | 1,870  | 3,546   | 3,179  |
| Pennsylvania.....   | 2                   | 2     | 276                                | 243    | 428   | 446    |
| Delaware.....       | 9                   | 9     | 1,152                              | 900    | 1,152   | 990    |
| Maryland.....       | 9                   | 9     | 1,134                              | 900    | 1,364   | 1,200  |
| Virginia.....       | 42                  | 44    | 5,334                              | 4,180  | 5,067   | 5,225  |
| West Virginia.....  | 3                   | 3     | 357                                | 345    | 536   | 621    |
| North Carolina..... | 99                  | 102   | 10,296                             | 10,302 | 11,737  | 9,993  |
| South Carolina..... | 76                  | 83    | 7,980                              | 7,885  | 9,337   | 7,096  |
| Georgia.....        | 132                 | 146   | 12,276                             | 12,410 | 11,908  | 7,818  |
| Florida.....        | 30                  | 32    | 2,850                              | 2,720  | 3,420   | 2,611  |
| Ohio.....           | 3                   | 3     | 309                                | 321    | 541   | 571    |
| Indiana.....        | 3                   | 3     | 380                                | 336    | 576   | 594    |
| Illinois.....       | 9                   | 9     | 873                                | 990    | 1,170   | 931    |
| Iowa.....           | 4                   | 3     | 416                                | 312    | 1,028   | 546    |
| Missouri.....       | 13                  | 14    | 1,430                              | 1,400  | 2,216   | 1,400  |
| Kansas.....         | 4                   | 4     | 540                                | 500    | 864   | 575    |
| Kentucky.....       | 18                  | 18    | 1,890                              | 1,872  | 2,835   | 2,153  |
| Tennessee.....      | 42                  | 44    | 4,284                              | 4,400  | 5,269   | 4,130  |
| Alabama.....        | 118                 | 135   | 11,446                             | 12,150 | 11,446  | 8,870  |
| Mississippi.....    | 103                 | 107   | 11,339                             | 8,560  | 11,896  | 6,334  |
| Louisiana.....      | 80                  | 88    | 8,080                              | 8,272  | 7,514   | 5,377  |
| Texas.....          | 95                  | 100   | 9,975                              | 8,200  | 12,968  | 6,970  |
| Oklahoma.....       | 23                  | 27    | 2,645                              | 2,646  | 3,491   | 2,805  |
| Arkansas.....       | 49                  | 54    | 5,145                              | 5,670  | 5,402   | 4,649  |
| New Mexico.....     | 1                   | 1     | 118                                | 126    | 260   | 323    |
| Arizona.....        | 1                   | 1     | 125                                | 125    | 268   | 228    |
| California.....     | 8                   | 8     | 1,016                              | 990    | 1,626   | 1,200  |
| United States.....  | 992                 | 1,066 | 103,925                            | 98,660 | 117,834   | 86,910 |

TABLE 131.—Sweet potatoes: Condition of crop, United States, on 1st of months named, 1901-1921.

| Year.     | July. | Aug.  | Sept. | Oct.  | Year.     | July. | Aug.  | Sept. | Oct.  | Year.     | July. | Aug.  | Sept. | Oct.  |
|-----------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|
|           | P.ct. | P.ct. | P.ct. | P.ct. |           | P.ct. | P.ct. | P.ct. | P.ct. |           | P.ct. | P.ct. | P.ct. | P.ct. |
| 1901..... | 83.1  | 80.7  | 78.7  | 79.0  | 1908..... | 89.5  | 83.8  | 89.7  | 85.5  | 1915..... | 88.7  | 85.5  | 87.5  | 85.0  |
| 1902..... | 83.6  | 78.3  | 77.2  | 79.7  | 1909..... | 89.7  | 86.9  | 81.3  | 77.8  | 1916..... | 90.4  | 85.9  | 82.7  | 79.2  |
| 1903..... | 80.2  | 83.7  | 91.1  | 83.7  | 1910..... | 87.3  | 85.4  | 83.9  | 80.2  | 1917..... | 81.9  | 84.8  | 85.7  | 83.2  |
| 1904..... | 87.3  | 83.5  | 89.0  | 86.1  | 1911..... | 78.4  | 77.7  | 79.1  | 78.1  | 1918..... | 86.4  | 78.3  | 74.5  | 77.4  |
| 1905..... | 90.6  | 90.1  | 89.5  | 88.6  | 1912..... | 86.9  | 85.0  | 84.1  | 82.0  | 1919..... | 90.1  | 87.1  | 88.0  | 83.9  |
| 1906..... | 90.9  | 91.2  | 83.7  | 86.0  | 1913..... | 88.5  | 83.8  | 81.4  | 80.1  | 1920..... | 87.2  | 86.9  | 85.8  | 87.1  |
| 1907..... | 85.9  | 85.7  | 85.7  | 82.7  | 1914..... | 77.1  | 75.5  | 81.8  | 80.7  | 1921..... | 85.1  | 84.5  | 80.7  | 77.0  |

TABLE 132.—Sweet potatoes: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | July.    | August.  | September. | October. | November production estimate. | Final estimate. |
|--------------|----------|----------|------------|----------|-------------------------------|-----------------|
|              | Bushels. | Bushels. | Bushels.   | Bushels. | Bushels.                      | Bushels.        |
| 1914.....    | 49,474   | 49,898   | 54,958     | 55,394   | 56,030                        | 56,574          |
| 1915.....    | 64,067   | 62,779   | 65,374     | 64,800   | 65,630                        | 75,639          |
| 1916.....    | 73,917   | 71,041   | 69,329     | 67,794   | 67,663                        | 70,955          |
| 1917.....    | 82,136   | 86,406   | 88,151     | 87,244   | 84,727                        | 88,822          |
| 1918.....    | 92,119   | 84,474   | 81,016     | 85,473   | 83,114                        | 87,924          |
| 1919.....    | 101,942  | 100,455  | 100,320    | 99,413   | 102,946                       | 97,126          |
| 1920.....    | 96,432   | 100,089  | 101,779    | 103,770  | 105,676                       | 103,925         |
| Average..... | 80,311   | 79,389   | 80,113     | 80,552   | 81,637                        | 82,281          |
| 1921.....    | 112,023  | 114,086  | 110,164    | 106,569  | 105,641                       | 98,660          |

## SWEET POTATOES—Continued.

TABLE 133.—Sweet potatoes: Yield per acre, price per bushel December 1, and value per acre, by States.

| State.  | Yield per acre (bushels). |      |      |      |      |      | Farm price per bushel (cents). |      |      |      |      |      |      |      |      |      | Value per acre (dollars). <sup>1</sup> |                           |        |
|---------|---------------------------|------|------|------|------|------|--------------------------------|------|------|------|------|------|------|------|------|------|--|---------------------------|--------|
|         | 5-year average 1917-1921. | 1917 | 1918 | 1919 | 1920 | 1921 | 10-year average 1912-1921.     | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921                                   | 5-year average 1912-1921. | 1921   |
| N. J.   | 123                       | 120  | 115  | 125  | 143  | 110  | 134                            | 84   | 78   | 95   | 70   | 120  | 160  | 190  | 220  | 155  | 170                                    | 205.43                    | 187.00 |
| Pa.     | 126                       | 110  | 120  | 140  | 138  | 124  | 130                            | 75   | 90   | 80   | 75   | 135  | 140  | 185  | 180  | 155  | 180                                    | 195.35                    | 223.20 |
| Del.    | 120                       | 112  | 120  | 138  | 128  | 100  | 91                             | 68   | 60   | 70   | 62   | 81   | 120  | 125  | 110  | 100  | 110                                    | 132.09                    | 110.00 |
| Md.     | 123                       | 118  | 130  | 140  | 126  | 100  | 99                             | 68   | 60   | 70   | 70   | 88   | 100  | 150  | 133  | 115  | 140                                    | 151.00                    | 140.00 |
| Va.     | 117                       | 104  | 120  | 140  | 127  | 95   | 101                            | 75   | 70   | 76   | 65   | 90   | 110  | 145  | 155  | 95   | 125                                    | 143.61                    | 118.75 |
| W. Va.  | 119                       | 140  | 106  | 115  | 119  | 115  | 139                            | 90   | 100  | 98   | 92   | 126  | 140  | 204  | 210  | 150  | 180                                    | 201.73                    | 207.00 |
| N. C.   | 103                       | 95   | 110  | 107  | 104  | 101  | 90                             | 82   | 61   | 65   | 56   | 75   | 105  | 132  | 138  | 114  | 97                                     | 118.28                    | 97.97  |
| S. C.   | 96                        | 95   | 95   | 90   | 105  | 95   | 96                             | 68   | 75   | 70   | 65   | 85   | 104  | 142  | 148  | 117  | 90                                     | 112.57                    | 85.50  |
| Ga.     | 91                        | 93   | 92   | 92   | 93   | 85   | 84                             | 66   | 69   | 69   | 61   | 81   | 105  | 125  | 110  | 97   | 93                                     | 77                        | 53.55  |
| Fla.    | 97                        | 95   | 110  | 100  | 95   | 85   | 98                             | 73   | 75   | 80   | 68   | 86   | 115  | 125  | 140  | 120  | 96                                     | 117.35                    | 81.60  |
| Ohio    | 100                       | 95   | 96   | 100  | 108  | 107  | 143                            | 87   | 106  | 98   | 98   | 150  | 175  | 175  | 215  | 175  | 178                                    | 175.60                    | 190.46 |
| Ind.    | 114                       | 106  | 108  | 105  | 120  | 132  | 141                            | 99   | 108  | 90   | 90   | 180  | 185  | 195  | 215  | 160  | 150                                    | 190.65                    | 198.00 |
| Ill.    | 96                        | 97   | 82   | 95   | 97   | 110  | 133                            | 95   | 106  | 95   | 82   | 125  | 150  | 175  | 175  | 135  | 90                                     | 139.74                    | 96.00  |
| Iowa    | 92                        | 90   | 93   | 67   | 104  | 104  | 178                            | 108  | 150  | 127  | 108  | 192  | 210  | 210  | 250  | 247  | 175                                    | 198.68                    | 182.00 |
| Mo.     | 103                       | 112  | 91   | 104  | 110  | 100  | 130                            | 95   | 105  | 96   | 82   | 150  | 141  | 186  | 187  | 155  | 160                                    | 159.43                    | 100.00 |
| Kans.   | 108                       | 92   | 80   | 106  | 135  | 125  | 141                            | 103  | 110  | 106  | 100  | 150  | 160  | 222  | 185  | 160  | 115                                    | 176.09                    | 143.75 |
| Ky.     | 101                       | 95   | 95   | 105  | 105  | 104  | 115                            | 85   | 94   | 77   | 70   | 100  | 123  | 175  | 160  | 150  | 115                                    | 140.10                    | 119.60 |
| Tenn.   | 101                       | 95   | 95   | 112  | 102  | 100  | 94                             | 72   | 80   | 69   | 59   | 87   | 105  | 136  | 117  | 123  | 95                                     | 115.31                    | 91.00  |
| Ala.    | 93                        | 90   | 96   | 94   | 97   | 90   | 83                             | 71   | 67   | 65   | 57   | 74   | 92   | 115  | 113  | 100  | 73                                     | 90.24                     | 65.70  |
| Miss.   | 91                        | 65   | 95   | 105  | 110  | 80   | 80                             | 62   | 62   | 63   | 55   | 67   | 97   | 104  | 112  | 105  | 74                                     | 89.98                     | 58.20  |
| La.     | 88                        | 79   | 75   | 90   | 101  | 94   | 82                             | 65   | 70   | 64   | 50   | 66   | 104  | 128  | 115  | 93   | 66                                     | 87.00                     | 61.10  |
| Tex.    | 87                        | 78   | 58   | 110  | 105  | 82   | 113                            | 104  | 96   | 87   | 70   | 90   | 140  | 175  | 150  | 130  | 85                                     | 118.46                    | 69.70  |
| Okla.   | 96                        | 90   | 65   | 110  | 115  | 98   | 131                            | 109  | 104  | 89   | 73   | 135  | 160  | 220  | 180  | 132  | 106                                    | 147.34                    | 103.88 |
| Ark.    | 102                       | 116  | 90   | 100  | 105  | 105  | 93                             | 90   | 80   | 77   | 61   | 90   | 96   | 138  | 135  | 105  | 82                                     | 107.39                    | 86.10  |
| N. Mex. | 121                       | 118  | 125  | 120  | 118  | 126  | 181                            | 105  | 130  | 113  | 120  | 180  | 205  | 200  | 225  | 0    | 260                                    | 261.80                    | 327.60 |
| Ariz.   | 137                       | 150  | 135  | 150  | 125  | 125  | 193                            | 150  | 170  | 150  | 150  | 185  | 227  | 238  | 250  | 230  | 182                                    | 324.06                    | 227.50 |
| Calif.  | 143                       | 167  | 170  | 180  | 127  | 120  | 122                            | 94   | 100  | 87   | 80   | 100  | 150  | 150  | 179  | 160  | 125                                    | 220.28                    | 150.00 |

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<sup>1</sup> Based upon farm price Dec. 1.

TABLE 134.—Sweet potatoes: Farm price, cents per bushel on 1st of each month, 1910-1921.

| Year.              | Jan.<br>1. | Feb.<br>1. | Mar.<br>1. | Apr.<br>1. | May<br>1. | June<br>1. | July<br>1. | Aug.<br>1. | Sept.<br>1. | Oct.<br>1. | Nov.<br>1. | Dec.<br>1. | Yearly<br>aver. |
|--------------------|------------|------------|------------|------------|-----------|------------|------------|------------|-------------|------------|------------|------------|-----------------|
| 1910.              | .....      | 76.8       | 79.4       | 82.4       | 83.4      | 79.4       | 75.1       | 78.2       | 81.2        | 77.6       | 71.8       | 67.1       | 77.5            |
| 1911.              | 75.0       | 86.4       | 84.4       | 91.2       | 99.3      | 98.7       | 99.0       | 105.8      | 102.6       | 91.8       | 90.9       | 75.8       | 91.2            |
| 1912.              | 83.0       | 90.2       | 98.0       | 108.9      | 118.0     | 115.0      | 112.2      | 107.8      | 95.7        | 84.4       | 76.8       | 72.6       | 97.0            |
| 1913.              | 80.4       | 85.4       | 88.9       | 92.6       | 93.8      | 92.0       | 90.1       | 94.1       | 94.3        | 82.8       | 75.7       | 72.6       | 87.0            |
| 1914.              | 78.2       | 84.3       | 86.7       | 80.6       | 94.5      | 94.2       | 82.6       | 97.5       | 92.8        | 87.3       | 76.3       | 73.0       | 86.5            |
| 1915.              | 79.0       | 82.0       | 84.7       | 90.7       | 95.6      | 96.7       | 88.9       | 85.8       | 84.6        | 72.7       | 63.7       | 62.1       | 82.2            |
| 1916.              | 64.9       | 71.2       | 77.3       | 78.6       | 80.5      | 83.4       | 79.4       | 87.1       | 89.9        | 83.7       | 80.6       | 84.8       | 80.1            |
| 1917.              | 90.1       | 95.8       | 110.7      | 124.0      | 141.3     | 148.4      | 140.5      | 129.3      | 132.6       | 116.1      | 111.2      | 110.8      | 121.0           |
| 1918.              | 117.2      | 123.1      | 142.7      | 151.6      | 156.0     | 148.8      | 134.3      | 144.7      | 156.2       | 180.6      | 146.0      | 135.2      | 143.0           |
| 1919.              | 142.1      | 143.8      | 160.7      | 160.7      | 174.6     | 173.7      | 159.8      | 167.8      | 175.4       | 154.7      | 143.9      | 136.4      | 157.0           |
| 1920.              | 138.2      | 156.6      | 172.2      | 185.8      | 205.2     | 215.6      | 213.6      | 223.6      | 200.7       | 180.8      | 122.1      | 113.4      | 175.7           |
| 1921.              | 113.0      | 117.8      | 119.8      | 127.4      | 127.2     | 128.8      | 125.6      | 144.1      | 135.6       | 108.3      | 99.5       | 88.1       | 118.7           |
| Average 1912-1921. | 98.7       | 105.0      | 113.5      | 121.6      | 128.6     | 129.9      | 122.6      | 128.2      | 125.8       | 111.2      | 98.6       | 94.7       | 114.8           |

## SWEET POTATOES—Continued.

TABLE 135.—Sweet potatoes: Wholesale price per barrel, 1921-1913.

| Date.          | Baltimore.  |        |        | St. Louis.               |        |        | New Orleans. |        |        | New York.            |        |        |
|----------------|-------------|--------|--------|--------------------------|--------|--------|--------------|--------|--------|----------------------|--------|--------|
|                | All grades. |        |        | All grades (per bushel). |        |        | All grades.  |        |        | Jersey and Southern. |        |        |
|                | Low.        | High.  | Aver.  | Low.                     | High.  | Aver.  | Low.         | High.  | Aver.  | Low.                 | High.  | Aver.  |
| 1921.          |             |        |        |                          |        |        |              |        |        |                      |        |        |
| January.....   | \$3.00      | \$4.50 | \$3.89 | \$1.00                   | \$2.00 | \$1.62 | \$0.75       | \$1.75 | \$1.52 | .....                | .....  | .....  |
| February.....  | 3.00        | 4.50   | 3.66   | 1.00                     | 1.75   | 1.41   | .75          | 2.50   | 1.65   | \$3.00               | \$5.00 | \$4.08 |
| March.....     | 3.50        | 6.00   | 4.62   | 1.25                     | 1.85   | 1.53   | .75          | 2.75   | 1.55   | 1.85                 | 5.00   | 3.02   |
| April.....     | 3.00        | 5.50   | 3.92   | 1.50                     | 2.10   | 1.76   | .75          | 3.25   | 1.96   | 2.00                 | 4.00   | 3.05   |
| May.....       | 4.00        | 4.50   | 4.25   | 1.75                     | 2.10   | 1.85   | 2.00         | 3.25   | 2.24   | 2.00                 | 4.00   | 3.00   |
| June.....      |             |        |        | 1.75                     | 2.00   | 1.87   |              |        |        |                      |        |        |
| July.....      | 7.00        | 8.00   | 7.50   | 2.25                     | 4.00   | 3.34   | 1.75         | 3.75   | 2.81   | .....                | .....  | .....  |
| August.....    | 3.75        | 5.50   | 4.64   | .75                      | 3.25   | 2.22   | .90          | 2.00   | 2.46   | 4.00                 | 6.00   | 5.38   |
| September..... | 2.00        | 4.25   | 3.33   | .75                      | 1.50   | 2.21   | .40          | 1.75   | 1.08   | 2.50                 | 4.25   | 3.41   |
| October.....   | 2.00        | 3.50   | 2.81   | .50                      | .85    | .71    | .25          | 1.75   | 1.03   | 2.00                 | 4.00   | 2.99   |
| November.....  | 2.00        | 4.00   | 2.89   | .50                      | 1.40   | .86    | .25          | 1.75   | 1.06   | 2.50                 | 4.00   | 3.25   |
| December.....  | 2.50        | 4.50   | 3.33   | .60                      | 2.00   | .92    | .40          | 1.60   | .94    | 2.00                 | 4.25   | 3.12   |
|                | 2.00        | 8.00   | 4.03   | .50                      | 4.00   | 1.69   | 1.75         | 3.75   | 2.03   | 1.85                 | 6.00   | 3.47   |
| 1920.....      | 2.00        | 14.00  | 5.40   | 1.00                     | 4.00   | 1.84   | .75          | 7.00   | 2.27   | 1.00                 | 10.50  | 4.38   |
| 1919.....      | 2.25        | 12.00  | 6.06   | .90                      | 4.25   | 1.99   | .75          | 5.50   | 2.44   | 1.50                 | 8.50   | 4.50   |
| 1918.....      | 1.00        | 10.00  | 5.45   | .65                      | 3.25   | 1.73   | 1.00         | 7.00   | 3.14   | 1.25                 | 10.00  | 3.11   |
| 1917.....      | .50         | 12.00  | .....  | 1.40                     | 2.75   | .....  | .65          | 1.60   | .....  | .50                  | 9.00   | .....  |
| 1916.....      | 1.00        | 5.50   | .....  | 1.50                     | 3.25   | .....  | .50          | 2.50   | .....  | 1.00                 | 5.50   | .....  |
| 1915.....      | .75         | 4.50   | .....  | 1.50                     | 4.50   | .....  | .75          | 3.00   | .....  | .50                  | 5.00   | .....  |
| 1914.....      | 1.00        | 5.50   | .....  | 1.50                     | 4.50   | .....  | .80          | 3.50   | .....  | .75                  | 5.00   | .....  |
| 1913.....      | .75         | 7.00   | .....  | .83                      | 6.25   | .....  | 2.00         | 2.00   | .....  | .40                  | 5.50   | .....  |

<sup>1</sup> Low, high, and average for first 3 months.

TABLE 136.—Sweet potatoes: Monthly average jobbing prices per bushel at 10 markets, 1921.

| Market.                       | January average. | February average. | March average. | April.        |          | May.          |          |
|-------------------------------|------------------|-------------------|----------------|---------------|----------|---------------|----------|
|                               |                  |                   |                | Range.        | Average. | Range.        | Average. |
| New York.....                 | \$1.76           | \$1.82            | \$2.40         | \$1.50-\$2.75 | \$2.32   | \$2.00-\$3.00 | \$2.73   |
| Chicago.....                  | 2.20             | 2.29              | 2.35           | 1.75-3.25     | 2.40     | 1.75-2.50     | 2.13     |
| Philadelphia.....             | 1.53             | 1.55              | 1.74           | 1.25-2.00     | 1.66     | .80-1.90      | 1.63     |
| Pittsburgh.....               | 1.91             | 1.73              | 2.03           | 1.40-2.15     | 1.89     | 1.50-2.15     | 1.92     |
| St. Louis.....                | 1.63             | 1.85              | 1.78           | 1.50-2.10     | 1.81     | 1.30-1.90     | 1.84     |
| Cincinnati.....               | 1.71             | 1.95              | 1.78           | 1.31-3.00     | 1.80     | 1.35-2.10     | 1.89     |
| St. Paul.....                 | 2.18             | 2.28              | 2.37           | 2.25          | 2.25     | .....         | .....    |
| Minneapolis.....              | 2.25             | 2.28              | 2.41           | 2.25          | 2.25     | .....         | .....    |
| Kansas City.....              | 1.59             | 1.64              | 1.66           | 1.75-2.25     | 1.92     | 1.35-2.25     | 2.01     |
| Washington <sup>1</sup> ..... | 1.66             | 1.73              | 1.72           | 1.38-2.00     | 1.59     | 1.02-2.50     | 1.89     |

| Market.                       | August. <sup>2</sup> |          | September.    |          | October average. | November average. | December average. |
|-------------------------------|----------------------|----------|---------------|----------|------------------|-------------------|-------------------|
|                               | Range.               | Average. | Range.        | average. |                  |                   |                   |
| New York.....                 | \$1.23-\$2.00        | \$1.51   | \$0.83-\$2.25 | \$1.48   | \$1.26           | \$1.36            | \$1.67            |
| Chicago.....                  | 1.14-2.75            | 2.01     | .80-2.50      | 1.70     | 1.57             | 1.45              | 1.65              |
| Philadelphia.....             | 1.15-1.50            | 1.33     | .92-1.35      | 1.14     | 1.02             | 1.03              | 1.43              |
| Pittsburgh.....               | .75-2.50             | 1.55     | 1.14-2.25     | 1.62     | 1.49             | 1.50              | 1.69              |
| St. Louis.....                | 1.00-1.40            | 1.23     | .50-1.38      | 1.09     | .94              | .....             | 1.11              |
| Cincinnati.....               | .90-1.54             | 1.19     | .90-1.40      | 1.21     | 1.11             | .98               | 1.27              |
| St. Paul.....                 | .....                | .....    | 1.50-3.00     | 2.06     | 1.77             | 1.79              | 1.89              |
| Minneapolis.....              | 2.15-3.25            | 2.47     | 1.62-2.75     | 2.24     | 1.89             | 1.85              | 2.07              |
| Kansas City.....              | 1.50-1.65            | 1.56     | 1.00-1.50     | 1.25     | 1.01             | 1.10              | 1.21              |
| Washington <sup>1</sup> ..... | 1.27-1.62            | 1.40     | .85-1.35      | 1.10     | .97              | .96               | 1.26              |

<sup>1</sup> Sales direct to retailers.<sup>2</sup> Quotations began August 23.

SWEET POTATOES—Continued.

TABLE 137.—Sweet potatoes: Carlot shipments by States of origin for 1919-1921.

| State.              | 1919  | 1920  | 1921  | State.           | 1919   | 1920   | 1921   |
|---------------------|-------|-------|-------|------------------|--------|--------|--------|
| New Jersey.....     | 1,881 | 2,643 | 2,843 | Mississippi..... | 103    | 66     | 115    |
| Delaware.....       | 1,095 | 1,435 | 1,934 | Louisiana.....   | 194    | 426    | 680    |
| Maryland.....       | 930   | 1,203 | 1,512 | Texas.....       | 463    | 512    | 663    |
| Virginia.....       | 5,751 | 5,244 | 5,340 | Arkansas.....    | 193    | 405    | 523    |
| North Carolina..... | 666   | 860   | 938   | New Mexico.....  | (1)    | 29     | 34     |
| Georgia.....        | 400   | 676   | 1,110 | California.....  | 718    | 722    | 888    |
| Florida.....        | 85    | 75    | 92    | All other.....   | 78     | 112    | 433    |
| Illinois.....       | 205   | 208   | 130   | Total.....       | 13,725 | 16,254 | 19,041 |
| Tennessee.....      | 596   | 1,153 | 1,152 |                  |        |        |        |
| Alabama.....        | 364   | 480   | 598   |                  |        |        |        |

<sup>1</sup> Included in all other.

HAY.

TABLE 138.—Hay: Acreage, production, value, exports, etc., in the United States, 1849-1921.

[See note for Table 117.]

| Year.          | Acreage<br>(000<br>omit-<br>ted). | Average<br>yield<br>per<br>acre. | Production<br>(000<br>omit-<br>ted). | Average<br>farm<br>price<br>per ton<br>Dec. 1 | Farm<br>value<br>Dec. 1 (000<br>omit-<br>ted). | Chicago prices No. 1 timothy<br>per ton, by carload lots. |        |                   |        | Domestic<br>ex-<br>ports,<br>fiscal<br>year be-<br>ginning<br>July 1. | Imports,<br>fiscal<br>year be-<br>ginning<br>July 1. |
|----------------|-----------------------------------|----------------------------------|--------------------------------------|---|--|---|--------|-------------------|--------|---|--|
|                |                                   |                                  |                                      |   |  | December.   |        | Following<br>May. |        |   |  |
|                |                                   |                                  |                                      |   |  | Low.  | High.  | Low.              | High.  |   |  |
|                | Acre.                             | Tons. <sup>1</sup>               | Tons. <sup>1</sup>                   | Dolls.  | Dollars.                                       | Dolls.  | Dolls. | Dolls.            | Dolls. | Tons. <sup>2</sup>  | Tons. <sup>2</sup>                                   |
| 1849.....      |                                   |                                  | 18,839                               |   |  |   |        |                   |        |   |  |
| 1850.....      |                                   |                                  | 19,084                               |   |  |   |        |                   |        |   |  |
| 1850-1875..... | 20,418                            | 1.22                             | 24,929                               | 11.51   | 286,891  |   |        |                   |        | 5,711   |  |
| 1876-1885..... | 31,124                            | 1.24                             | 38,723                               | 9.11  | 352,577  | 11.56   | 12.36  | 12.38             | 14.22  | 11,665  | 82,510   |
| 1886-1895..... | 40,127                            | 1.13                             | 47,401                               | 8.87  | 420,673  | 10.75   | 11.75  | 11.70             | 14.42  | 34,724  | 124,213  |
| 1896.....      | 40,878                            | 1.33                             | 54,380                               | 7.48  | 406,957  | 8.00  | 8.50   | 8.50              | 9.00   | 61,658  | 119,942  |
| 1897.....      | 41,336                            | 1.42                             | 53,873                               | 7.28  | 423,919  | 8.00  | 8.50   | 9.50              | 10.50  | 81,827  | 3,887  |
| 1898.....      | 43,120                            | 1.55                             | 63,772                               | 6.63  | 442,905  | 8.00  | 8.25   | 9.50              | 10.50  | 64,916  | 19,872   |
| 1899.....      | 45,127                            | 1.33                             | 5,450                                | 8.20  | 470,844  | 10.50   | 11.50  | 10.50             | 12.50  | 72,716  | 143,890  |
| 1900.....      | 42,070                            | 1.27                             | 53,231                               | 9.72  | 517,399  | 11.50   | 14.00  | 12.50             | 13.50  | 89,364  | 142,620  |
| 1901.....      | 42,066                            | 1.33                             | 55,819                               | 9.91  | 553,328  | 13.00   | 13.50  | 12.50             | 13.50  | 153,431   | 48,415   |
| 1902.....      | 42,962                            | 1.52                             | 65,236                               | 9.19  | 599,731  | 12.00   | 12.50  | 13.50             | 15.00  | 50,974  | 293,112  |
| 1903.....      | 43,400                            | 1.57                             | 68,154                               | 9.35  | 637,435  | 10.00   | 12.00  | 12.00             | 15.00  | 60,730  | 114,388  |
| 1904.....      | 44,645                            | 1.55                             | 69,192                               | 8.91  | 616,369  | 10.50   | 11.50  | 11.00             | 12.00  | 66,557  | 46,214   |
| 1905.....      | 46,991                            | 1.59                             | 72,973                               | 8.59  | 627,023  | 10.00   | 12.00  | 11.50             | 12.50  | 70,172  | 68,540   |
| 1906.....      | 47,891                            | 1.39                             | 66,341                               | 10.43   | 692,116  | 15.50   | 18.00  | 15.50             | 20.50  | 58,602  | 61,116   |
| 1907.....      | 49,098                            | 1.47                             | 72,261                               | 11.75   | 850,915  | 13.00   | 17.50  | 13.00             | 14.00  | 77,281  | 10,063   |
| 1908.....      | 51,196                            | 1.53                             | 78,440                               | 9.14  | 716,644  | 11.50   | 12.00  | 12.00             | 13.00  | 64,641  | 6,712  |
| 1909.....      | 51,041                            | 1.46                             | 74,384                               | 10.58   | 786,722  | 16.00   | 17.00  | 12.50             | 16.00  | 55,007  | 96,829   |
| 1910.....      | 51,015                            | 1.36                             | 69,378                               | 12.14   | 842,252  | 16.00   | 19.00  | 18.50             | 23.50  | 55,233  | 336,767  |
| 1911.....      | 48,240                            | 1.14                             | 54,916                               | 14.29   | 784,926  | 20.00   | 22.00  | 24.00             | 28.00  | 59,730  | 699,004  |
| 1912.....      | 49,530                            | 1.47                             | 72,691                               | 11.79   | 856,695  | 13.00   | 18.00  | 14.00             | 16.50  | 60,720  | 156,323  |
| 1913.....      | 48,954                            | 1.31                             | 64,116                               | 12.43   | 797,077  | 14.50   | 18.00  | 15.00             | 17.50  | 50,161  | 170,786  |
| 1914.....      | 49,145                            | 1.43                             | 70,071                               | 11.12   | 779,068  | 15.00   | 16.00  | 16.50             | 17.50  | 105,508   | 20,167   |
| 1915.....      | 51,108                            | 1.68                             | 85,920                               | 10.63   | 913,644  | 14.50   | 16.50  | 17.50             | 20.00  | 178,336   | 43,184   |
| 1916.....      | 55,721                            | 1.64                             | 91,192                               | 11.22   | 1,022,930                                      | 15.00   | 17.50  | 19.00             | 22.00  | 85,529  | 58,147   |
| 1917.....      | 55,203                            | 1.51                             | 83,308                               | 17.09   | 1,423,766                                      | 26.00   | 28.00  | 20.00             | 26.00  | 30,145  | 410,738  |
| 1918.....      | 55,755                            | 1.37                             | 76,660                               | 20.13   | 1,543,494                                      | 29.00   | 31.00  | 34.00             | 37.00  | 28,898  | 277,448  |
| 1919.....      | 56,888                            | 1.52                             | 86,359                               | 20.08   | 1,734,085                                      | 28.00   | 32.00  | 35.00             | 50.00  | 59,948  | 224,952  |
| 1920.....      | 58,101                            | 1.51                             | 87,855                               | 17.76   | 1,560,235                                      | 26.00   | 32.00  | 21.00             | 23.00  | 49,505  | 112,665  |
| 1921.....      | 58,742                            | 1.39                             | 81,567                               | 12.13   | 989,693  | 20.00   | 24.00  | 26.00             | 28.00  |   |  |

<sup>1</sup> 2,000 pounds.

<sup>2</sup> 2,240 pounds.

\* Figures adjusted to census basis.



## HAY—Continued.

TABLE 139.—Hay: Acreage, production, and total farm value, by States, 1920-21.

| State.  | Tame hay.           |        |                                 |        |   |         | Wild, salt, and prairie hay. |        |                                 |        |   |         |
|---------|---------------------|--------|---------------------------------|--------|---|---------|------------------------------|--------|---------------------------------|--------|---|---------|
|         | Thousands of acres. |        | Production (thousands of tons). |        | Total value, basis Dec. 1 price (thousands of dollars). |         | Thousands of acres.          |        | Production (thousands of tons). |        | Total value, basis Dec. 1 price (thousands of dollars). |         |
|         | 1920                | 1921   | 1920                            | 1921   | 1920  | 1921    | 1920                         | 1921   | 1920                            | 1921   | 1920  | 1921    |
| Me.     | 1,220               | 1,245  | 1,159                           | 996    | 28,511  | 19,920  | 14                           | 15     | 14                              | 13     | 280   | 214     |
| N. H.   | 450                 | 450    | 495                             | 428    | 12,375  | 11,984  | 11                           | 12     | 10                              | 10     | 200   | 200     |
| Vt.     | 914                 | 900    | 1,234                           | 945    | 28,382  | 20,790  | 13                           | 13     | 13                              | 13     | 260   | 234     |
| Mass.   | 420                 | 423    | 567                             | 529    | 15,876  | 14,283  | 12                           | 12     | 13                              | 12     | 260   | 180     |
| R. I.   | 45                  | 45     | 50                              | 50     | 1,660   | 1,350   | 1                            | 1      | 1                               | 1      | 25  | 17      |
| Conn.   | 326                 | 320    | 334                             | 416    | 11,520  | 10,816  | 9                            | 9      | 9                               | 10     | 180   | 170     |
| N. Y.   | 4,895               | 4,895  | 6,119                           | 4,886  | 144,408   | 83,110  | 65                           | 65     | 77                              | 65     | 1,386   | 974     |
| N. J.   | 301                 | 300    | 497                             | 396    | 13,668  | 7,128   | 20                           | 23     | 27                              | 28     | 405   | 365     |
| Pa.     | 2,939               | 3,025  | 4,115                           | 3,630  | 96,702  | 61,710  | 22                           | 23     | 27                              | 28     | 486   | 336     |
| Del.    | 74                  | 73     | 104                             | 88     | 2,236   | 1,540   | 1                            | 1      | 2                               | 1      | 30  | 8       |
| Md.     | 399                 | 390    | 618                             | 526    | 15,450  | 7,943   | 4                            | 4      | 6                               | 5      | 102   | 52      |
| Va.     | 912                 | 930    | 1,186                           | 930    | 27,871  | 15,461  | 13                           | 12     | 16                              | 9      | 256   | 130     |
| W. Va.  | 718                 | 725    | 893                             | 870    | 21,732  | 15,225  | 11                           | 11     | 13                              | 12     | 208   | 144     |
| N. C.   | 640                 | 690    | 672                             | 711    | 15,456  | 14,078  | 43                           | 42     | 53                              | 42     | 967   | 546     |
| S. C.   | 360                 | 396    | 385                             | 360    | 8,375   | 7,200   | 6                            | 6      | 7                               | 6      | 126   | 96      |
| Ga.     | 660                 | 693    | 535                             | 610    | 12,572  | 9,636   | 19                           | 19     | 17                              | 19     | 306   | 243     |
| Fla.    | 115                 | 110    | 75                              | 80     | 1,425   | 1,560   | 6                            | 6      | 6                               | 5      | 150   | 80      |
| Ohio.   | 3,150               | 3,213  | 4,252                           | 4,081  | 82,914  | 46,932  | 3                            | 3      | 4                               | 3      | 60  | 30      |
| Ind.    | 2,205               | 2,249  | 2,944                           | 2,429  | 54,889  | 31,577  | 22                           | 21     | 26                              | 22     | 338   | 198     |
| Ill.    | 3,080               | 3,172  | 3,980                           | 3,743  | 79,810  | 50,530  | 61                           | 62     | 73                              | 74     | 2,037   | 755     |
| Mich.   | 2,739               | 2,928  | 3,347                           | 2,928  | 70,287  | 38,064  | 53                           | 60     | 68                              | 66     | 850   | 607     |
| Wis.    | 3,064               | 3,064  | 5,269                           | 4,136  | 106,264   | 63,694  | 358                          | 364    | 468                             | 437    | 5,267   | 3,933   |
| Minn.   | 1,856               | 1,949  | 3,155                           | 2,924  | 35,336  | 25,146  | 1,910                        | 1,910  | 2,674                           | 2,445  | 33,024  | 15,892  |
| Iowa.   | 3,100               | 3,148  | 4,712                           | 4,659  | 76,523  | 43,329  | 490                          | 475    | 622                             | 551    | 8,459   | 4,077   |
| Mo.     | 3,192               | 3,300  | 3,968                           | 3,616  | 62,141  | 35,487  | 140                          | 129    | 157                             | 142    | 1,884   | 858     |
| N. Dak. | 916                 | 961    | 1,145                           | 1,207  | 11,336  | 9,967   | 2,308                        | 2,308  | 2,193                           | 2,308  | 25,229  | 17,310  |
| S. Dak. | 976                 | 970    | 1,708                           | 1,358  | 14,518  | 8,691   | 3,615                        | 3,500  | 4,049                           | 2,800  | 33,870  | 15,400  |
| Nebr.   | 1,689               | 1,568  | 3,132                           | 2,817  | 23,728  | 19,719  | 2,315                        | 2,256  | 2,361                           | 1,895  | 25,027  | 9,475   |
| Kans.   | 1,749               | 1,552  | 3,658                           | 2,794  | 37,108  | 22,352  | 1,016                        | 932    | 936                             | 1,016  | 9,860   | 5,588   |
| Ky.     | 1,061               | 1,061  | 1,261                           | 1,104  | 27,742  | 17,112  | 23                           | 23     | 23                              | 23     | 345   | 264     |
| Tenn.   | 1,356               | 1,329  | 1,738                           | 1,528  | 35,598  | 23,694  | 50                           | 50     | 58                              | 58     | 1,056   | 667     |
| Ala.    | 764                 | 836    | 637                             | 769    | 12,812  | 11,996  | 25                           | 25     | 25                              | 32     | 475   | 334     |
| Miss.   | 406                 | 428    | 576                             | 493    | 8,907   | 7,124   | 41                           | 40     | 58                              | 40     | 991   | 443     |
| La.     | 208                 | 208    | 288                             | 266    | 4,608   | 3,724   | 14                           | 15     | 18                              | 20     | 342   | 200     |
| Tex.    | 556                 | 639    | 778                             | 882    | 10,425  | 8,732   | 194                          | 203    | 213                             | 223    | 3,196   | 2,074   |
| Okla.   | 367                 | 910    | 1,387                           | 1,333  | 14,564  | 11,341  | 521                          | 465    | 625                             | 485    | 7,500   | 2,892   |
| Ark.    | 647                 | 670    | 751                             | 724    | 12,016  | 9,050   | 137                          | 129    | 153                             | 135    | 2,496   | 1,215   |
| Mont.   | 1,105               | 1,045  | 1,959                           | 1,881  | 23,868  | 16,365  | 652                          | 657    | 619                             | 526    | 5,571   | 4,524   |
| Wyo.    | 652                 | 632    | 1,364                           | 1,228  | 16,368  | 9,210   | 260                          | 244    | 260                             | 195    | 3,718   | 1,268   |
| Colo.   | 1,266               | 1,194  | 2,700                           | 2,507  | 32,400  | 17,298  | 419                          | 407    | 440                             | 407    | 6,160   | 2,442   |
| N. Mex. | 187                 | 191    | 449                             | 458    | 7,633   | 5,317   | 47                           | 48     | 39                              | 41     | 468   | 451     |
| Ariz.   | 123                 | 150    | 381                             | 450    | 11,049  | 5,850   | 8                            | 15     | 6                               | 15     | 66  | 165     |
| Utah.   | 461                 | 490    | 1,208                           | 1,284  | 15,704  | 7,961   | 107                          | 106    | 122                             | 117    | 1,320   | 525     |
| Nev.    | 172                 | 177    | 401                             | 473    | 6,416   | 4,257   | 176                          | 179    | 176                             | 199    | 1,760   | 1,791   |
| Idaho.  | 1,059               | 1,029  | 2,835                           | 2,984  | 35,438  | 19,998  | 126                          | 121    | 150                             | 196    | 1,620   | 829     |
| Wash.   | 979                 | 1,008  | 1,958                           | 2,621  | 36,223  | 27,520  | 29                           | 30     | 33                              | 45     | 330   | 315     |
| Oreg.   | 950                 | 995    | 2,138                           | 2,283  | 31,001  | 22,422  | 288                          | 268    | 274                             | 266    | 2,955   | 1,163   |
| Calif.  | 2,159               | 2,129  | 4,945                           | 5,006  | 95,900  | 55,033  | 170                          | 167    | 177                             | 184    | 2,124   | 1,288   |
| U. S.   | 58,101              | 58,742 | 87,855                          | 81,607 | 1,860,236   | 983,693 | 15,787                       | 15,493 | 17,480                          | 15,235 | 193,115   | 101,063 |

HAY—Continued.

TABLE 140.—Hay: Stocks on farms May 1.

| Year.    | Production of all hay preceding year (tons). | Percent on farms May 1. | Tons on farms May 1. | Price per ton May 1. | Year.    | Production of all hay preceding year (tons). | Percent on farms May 1. | Tons on farms May 1. | Price per ton May 1. |
|----------|--|-------------------------|----------------------|----------------------|----------|--|-------------------------|----------------------|----------------------|
| 1910.... | 87,216,000                                   | 11.5                    | 10,053,000           | \$11.08              | 1917.... | 110,992,000                                  | 11.4                    | 12,659,060           | \$13.94              |
| 1911.... | 82,529,000                                   | 12.4                    | 10,222,000           | 11.69                | 1918.... | 98,432,000                                   | 11.7                    | 11,476,000           | 17.97                |
| 1912.... | 67,071,000                                   | 8.5                     | 5,732,000            | 16.31                | 1919.... | 91,139,000                                   | 9.4                     | 8,559,000            | 22.31                |
| 1913.... | 90,734,000                                   | 14.9                    | 13,523,000           | 10.42                | 1920.... | 104,760,000                                  | 10.1                    | 10,618,000           | 24.22                |
| 1914.... | 79,179,000                                   | 12.2                    | 9,631,000            | 11.63                | 1921.... | 105,315,000                                  | 17.8                    | 18,771,000           | 13.08                |
| 1915.... | 88,686,000                                   | 12.2                    | 10,797,000           | 11.03                | 1922.... | 96,802,000                                   | 11.1                    | 10,792,000           | 12.98                |
| 1916.... | 107,263,000                                  | 13.5                    | 14,452,000           | 11.27                |          |  |                         |                      |                      |

TABLE 141.—Hay: Condition of crop, United States, on 1st of months named, 1908–1921.

| Year.     | May. | June. | July. | August. | Year.     | May. | June. | July. | August. |
|-----------|------|-------|-------|---------|-----------|------|-------|-------|---------|
| 1908..... | 93.5 | 96.8  | 92.6  | 92.1    | 1915..... | 91.2 | 89.6  | 87.5  | 90.1    |
| 1909..... | 84.5 | 87.6  | 87.8  | 88.3    | 1916..... | 83.2 | 90.7  | 93.5  | 95.7    |
| 1910..... | 89.8 | 86.1  | 86.2  | 83.1    | 1917..... | 83.7 | 85.1  | 84.3  | 84.6    |
| 1911..... | 84.2 | 78.8  | 65.0  | 67.6    | 1918..... | 89.6 | 89.0  | 82.2  | 82.3    |
| 1912..... | 86.0 | 90.3  | 86.2  | 90.0    | 1919..... | 94.3 | 94.1  | 91.1  | 91.0    |
| 1913..... | 83.5 | 87.5  | 79.5  | 81.8    | 1920..... | 89.4 | 83.9  | 86.7  | 90.5    |
| 1914..... | 90.7 | 89.1  | 82.2  | 86.7    | 1921..... | 91.5 | 85.0  | 79.5  | 82.5    |

TABLE 142.—Hay: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.     | May.    | June.   | July.   | August. | September production estimate. | Final estimate. |
|-----------|---------|---------|---------|---------|--------------------------------|-----------------|
|           | Tons.   | Tons.   | Tons.   | Tons.   | Tons.                          | Tons.           |
| 1917..... | 106,371 | 102,088 | 103,184 | 100,154 | 91,715                         | 98,439          |
| 1918..... | 107,550 | 106,962 | 101,642 | 99,341  | 86,254                         | 91,139          |
| 1919..... | 114,930 | 115,007 | 115,701 | 110,876 | 103,544                        | 104,760         |
| 1920..... | 111,831 | 111,788 | 102,444 | 107,266 | 106,451                        | 105,315         |
| 1921..... | 107,734 | 100,977 | 96,961  | 97,073  | 94,619                         | 106,802         |

<sup>1</sup> Preliminary.

## HAY—Continued.

TABLE 143.—Hay: Yield per acre, price per ton December 1, and value per acre, by States.

| State.  | Yield per acre (tons).     |       |       |       |       |       | Farm price per ton (dollars). |       |       |       |       |       |       |       |       |       |       | Value per acre (dollars). <sup>1</sup> |       |
|---------|----------------------------|-------|-------|-------|-------|-------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|
|         | 5-year average, 1917-1921. | 1917. | 1918. | 1919. | 1920. | 1921. | 10-year average, 1912-1921.   | 1912. | 1913. | 1914. | 1915. | 1916. | 1917. | 1918. | 1919. | 1920. | 1921. | 5-year average, 1916-1920.             | 1921. |
| Me...   | 1.09                       | 1.35  | 1.15  | 1.20  | 0.95  | .80   | 15.63                         | 13.70 | 13.90 | 13.10 | 14.90 | 12.40 | 11.10 | 13.90 | 18.70 | 24.60 | 20.00 | 18.95                                  | 16.00 |
| N. H.   | 1.15                       | 1.35  | 1.15  | 1.20  | 1.10  | .95   | 18.89                         | 15.00 | 17.20 | 17.00 | 17.40 | 14.50 | 12.00 | 18.80 | 24.00 | 25.00 | 28.00 | 23.03                                  | 26.60 |
| Vt....  | 1.36                       | 1.62  | 1.30  | 1.50  | 1.35  | 1.05  | 16.41                         | 14.00 | 14.50 | 14.60 | 15.50 | 12.60 | 11.50 | 16.30 | 20.10 | 23.00 | 22.00 | 24.49                                  | 23.10 |
| Mass    | 1.34                       | 1.50  | 1.20  | 1.40  | 1.35  | 1.25  | 23.30                         | 21.50 | 21.10 | 21.50 | 20.00 | 19.00 | 19.00 | 28.00 | 27.00 | 28.00 | 27.00 | 33.26                                  | 33.75 |
| R. I.   | 1.25                       | 1.50  | 1.30  | 1.25  | 1.10  | 1.10  | 24.41                         | 22.20 | 21.20 | 20.20 | 22.50 | 20.00 | 20.30 | 25.50 | 32.00 | 33.20 | 27.00 | 33.42                                  | 29.70 |
| Conn.   | 1.33                       | 1.50  | 1.30  | 1.35  | 1.20  | 1.30  | 23.05                         | 22.50 | 20.10 | 19.50 | 20.00 | 18.50 | 19.50 | 24.00 | 30.30 | 30.00 | 26.00 | 33.18                                  | 33.80 |
| N. Y.   | 1.27                       | 1.46  | 1.25  | 1.40  | 1.25  | 1.00  | 17.00                         | 14.90 | 15.30 | 14.00 | 15.70 | 11.90 | 15.10 | 20.40 | 20.50 | 23.60 | 18.00 | 25.01                                  | 18.00 |
| N. J.   | 1.48                       | 1.45  | 1.50  | 1.50  | 1.65  | 1.32  | 21.77                         | 20.00 | 19.00 | 19.50 | 19.00 | 17.60 | 20.00 | 28.00 | 29.10 | 27.50 | 18.00 | 37.64                                  | 23.76 |
| Pa....  | 1.35                       | 1.41  | 1.41  | 1.35  | 1.40  | 1.20  | 18.01                         | 15.60 | 14.90 | 14.50 | 15.60 | 13.80 | 17.50 | 23.70 | 24.00 | 23.50 | 17.00 | 29.10                                  | 20.40 |
| Del...  | 1.28                       | 1.26  | 1.25  | 1.28  | 1.40  | 1.20  | 19.41                         | 15.00 | 15.70 | 17.00 | 17.00 | 15.90 | 20.50 | 28.00 | 26.00 | 21.50 | 17.50 | 29.45                                  | 21.00 |
| Md...   | 1.38                       | 1.25  | 1.35  | 1.40  | 1.55  | 1.35  | 13.59                         | 14.40 | 15.20 | 15.30 | 16.20 | 14.00 | 19.90 | 26.80 | 24.00 | 25.00 | 15.10 | 30.83                                  | 20.38 |
| Va....  | 1.20                       | 1.16  | 1.35  | 1.20  | 1.30  | 1.00  | 13.78                         | 15.20 | 15.50 | 17.20 | 15.70 | 15.00 | 21.30 | 23.00 | 23.70 | 23.50 | 17.70 | 27.01                                  | 17.70 |
| W. Va.  | 1.24                       | 1.27  | 1.30  | 1.20  | 1.25  | 1.20  | 18.55                         | 15.00 | 14.90 | 17.20 | 15.00 | 14.50 | 21.10 | 23.50 | 25.60 | 24.20 | 17.50 | 28.13                                  | 21.00 |
| N. C.   | 1.09                       | 1.31  | 1.20  | 1.02  | 1.05  | 1.03  | 19.18                         | 16.70 | 16.50 | 17.10 | 16.50 | 17.50 | 19.70 | 21.00 | 24.00 | 23.00 | 19.80 | 28.10                                  | 20.39 |
| S. C.   | .93                        | 1.08  | 1.10  | .90   | .93   | .91   | 20.87                         | 18.00 | 18.70 | 17.00 | 15.60 | 16.70 | 20.60 | 26.10 | 31.00 | 25.00 | 20.00 | 24.76                                  | 18.20 |
| Ga....  | .96                        | 1.03  | 1.24  | .85   | .81   | .88   | 19.05                         | 17.00 | 17.90 | 16.20 | 15.10 | 16.20 | 20.00 | 23.50 | 25.30 | 23.50 | 15.80 | 21.78                                  | 13.90 |
| Fla...  | 1.20                       | 1.10  | 1.14  | .77   | .65   | .73   | 18.37                         | 18.10 | 18.20 | 17.20 | 16.00 | 16.00 | 18.20 | 18.50 | 23.00 | 19.00 | 19.50 | 16.13                                  | 14.24 |
| Ohio    | 1.36                       | 1.42  | 1.40  | 1.35  | 1.35  | 1.27  | 15.65                         | 13.00 | 12.80 | 13.40 | 12.70 | 10.60 | 19.00 | 22.20 | 21.80 | 19.50 | 11.50 | 26.09                                  | 14.60 |
| Ind...  | 1.30                       | 1.45  | 1.45  | 1.22  | 1.29  | 1.08  | 15.39                         | 11.40 | 14.10 | 14.10 | 11.00 | 10.80 | 13.80 | 19.80 | 21.60 | 19.30 | 13.00 | 24.56                                  | 14.04 |
| Ill.... | 1.28                       | 1.25  | 1.35  | 1.35  | 1.25  | 1.18  | 15.97                         | 12.60 | 14.10 | 14.40 | 10.80 | 11.30 | 20.00 | 21.00 | 21.40 | 20.60 | 13.50 | 24.87                                  | 15.93 |
| Mich.   | 1.19                       | 1.50  | 1.03  | 1.20  | 1.20  | 1.00  | 15.81                         | 12.70 | 13.10 | 12.00 | 12.20 | 10.00 | 17.20 | 23.50 | 23.40 | 21.00 | 13.00 | 24.08                                  | 13.00 |
| Wis...  | 1.58                       | 1.70  | 1.40  | 1.77  | 1.70  | 1.35  | 14.90                         | 12.10 | 11.10 | 9.30  | 9.90  | 11.60 | 17.30 | 21.60 | 20.30 | 20.40 | 15.40 | 30.00                                  | 20.79 |
| Minn.   | 1.61                       | 1.55  | 1.40  | 1.90  | 1.70  | 1.50  | 9.30                          | 6.40  | 6.60  | 6.10  | 6.40  | 7.00  | 12.10 | 14.10 | 14.50 | 11.20 | 8.60  | 19.61                                  | 12.90 |
| Iowa    | 1.41                       | 1.23  | 1.30  | 1.53  | 1.52  | 1.48  | 12.48                         | 9.50  | 9.60  | 10.10 | 8.70  | 9.00  | 16.80 | 18.20 | 17.40 | 16.24 | 9.30  | 23.22                                  | 13.76 |
| Mo...   | 1.15                       | 1.15  | .90   | 1.35  | 1.24  | 1.13  | 13.87                         | 9.80  | 14.50 | 13.60 | 8.50  | 9.30  | 17.50 | 20.50 | 19.50 | 15.70 | 9.80  | 19.29                                  | 11.07 |
| N. D.   | 1.12                       | .88   | 1.10  | 1.00  | 1.25  | 1.35  | 8.60                          | 5.50  | 5.80  | 5.20  | 5.70  | 6.00  | 11.50 | 14.60 | 14.10 | 9.90  | 7.70  | 12.57                                  | 10.40 |
| S. D.   | 1.63                       | 1.50  | 1.60  | 1.75  | 1.75  | 1.40  | 7.80                          | 6.10  | 6.50  | 5.70  | 5.30  | 5.40  | 10.60 | 10.00 | 13.50 | 8.50  | 6.40  | 16.18                                  | 8.96  |
| Nebr.   | 1.71                       | 1.60  | 1.40  | 1.86  | 1.90  | 1.80  | 9.93                          | 8.40  | 8.70  | 6.90  | 5.80  | 7.10  | 15.20 | 17.20 | 14.00 | 9.00  | 7.00  | 21.29                                  | 12.60 |
| Kans.   | 2.05                       | 2.18  | 1.73  | 2.42  | 2.08  | 1.80  | 11.07                         | 7.60  | 12.50 | 7.40  | 5.60  | 7.60  | 16.60 | 19.40 | 15.30 | 10.20 | 8.00  | 28.32                                  | 14.40 |
| Ky....  | 1.20                       | 1.30  | 1.30  | 1.15  | 1.20  | 1.05  | 17.82                         | 13.70 | 16.50 | 16.00 | 12.50 | 12.60 | 20.30 | 23.70 | 25.40 | 22.00 | 15.50 | 26.09                                  | 16.23 |
| Tenn.   | 1.23                       | 1.20  | 1.35  | 1.16  | 1.23  | 1.15  | 18.42                         | 15.80 | 16.20 | 17.00 | 13.90 | 15.00 | 19.30 | 24.00 | 27.00 | 20.50 | 15.50 | 26.76                                  | 17.82 |
| Ala...  | .86                        | .80   | .81   | .90   | .89   | .92   | 16.19                         | 14.60 | 14.20 | 13.80 | 12.40 | 13.00 | 16.20 | 20.30 | 22.30 | 19.50 | 15.60 | 16.11                                  | 14.85 |
| Miss.   | 1.32                       | 1.45  | 1.20  | 1.35  | 1.44  | 1.15  | 14.60                         | 12.50 | 13.50 | 12.00 | 11.00 | 11.00 | 15.30 | 18.50 | 20.50 | 17.20 | 14.50 | 22.45                                  | 16.65 |
| La....  | 1.40                       | 1.60  | 1.30  | 1.44  | 1.40  | 1.28  | 14.70                         | 12.70 | 12.50 | 12.00 | 10.30 | 11.00 | 14.30 | 21.20 | 23.00 | 16.00 | 14.00 | 24.93                                  | 17.92 |
| Tex...  | 1.28                       | 1.00  | 1.00  | 1.60  | 1.40  | 1.38  | 13.66                         | 10.40 | 11.80 | 9.80  | 7.90  | 10.50 | 20.00 | 24.90 | 13.00 | 13.40 | 9.90  | 21.01                                  | 13.66 |
| Okla.   | 1.55                       | 1.60  | 1.20  | 1.82  | 1.60  | 1.52  | 10.90                         | 7.40  | 10.40 | 7.90  | 5.60  | 9.00  | 15.40 | 19.50 | 15.10 | 10.50 | 8.20  | 21.52                                  | 12.48 |
| Ark...  | 1.31                       | 1.47  | 1.30  | 1.12  | 1.16  | 1.08  | 14.51                         | 12.00 | 13.50 | 12.90 | 10.30 | 12.50 | 15.40 | 19.50 | 20.50 | 16.00 | 12.50 | 16.13                                  | 13.50 |
| Mont.   | 1.52                       | 1.40  | 1.60  | 1.00  | 1.80  | 1.80  | 12.70                         | 8.30  | 9.60  | 8.70  | 7.50  | 11.00 | 18.60 | 19.60 | 23.00 | 12.00 | 8.70  | 24.14                                  | 16.56 |
| Wyo...  | 1.80                       | 1.70  | 1.20  | 1.40  | 2.00  | 1.80  | 11.61                         | 8.60  | 6.70  | 7.50  | 7.50  | 12.00 | 17.00 | 14.00 | 23.00 | 12.00 | 7.50  | 27.22                                  | 13.50 |
| Colo... | 2.19                       | 2.45  | 2.22  | 2.05  | 2.15  | 2.10  | 11.42                         | 8.70  | 10.00 | 7.40  | 7.60  | 11.00 | 16.00 | 15.50 | 13.50 | 12.00 | 6.90  | 32.27                                  | 14.49 |
| N. M.   | 2.26                       | 1.90  | 2.20  | 2.40  | 2.40  | 2.40  | 14.16                         | 8.50  | 12.10 | 9.30  | 8.80  | 14.00 | 21.00 | 20.00 | 18.20 | 17.00 | 12.70 | 39.28                                  | 30.48 |
| Ariz... | 3.26                       | 3.50  | 3.30  | 3.10  | 3.00  | 2.60  | 12.00                         | 11.00 | 8.80  | 9.60  | 14.50 | 24.80 | 24.00 | 20.00 | 29.00 | 13.00 | 0.00  | 75.72                                  | 39.00 |
| Utah    | 2.48                       | 2.90  | 2.35  | 1.92  | 2.62  | 2.62  | 12.10                         | 8.00  | 9.10  | 7.70  | 8.00  | 15.00 | 15.00 | 17.10 | 21.90 | 13.00 | 6.20  | 33.56                                  | 16.24 |
| Neuv.   | 2.56                       | 2.90  | 2.62  | 2.33  | 2.67  | 2.12  | 12.55                         | 8.70  | 11.00 | 8.30  | 7.50  | 9.60  | 15.90 | 19.90 | 19.60 | 18.00 | 9.00  | 40.57                                  | 24.03 |
| Idaho   | 2.78                       | 3.00  | 3.00  | 2.30  | 2.70  | 2.90  | 11.54                         | 6.30  | 7.20  | 7.30  | 7.70  | 12.10 | 16.00 | 17.60 | 22.00 | 12.50 | 6.70  | 43.08                                  | 19.43 |
| Wash.   | 2.20                       | 2.20  | 1.80  | 2.40  | 2.09  | 2.60  | 15.40                         | 10.10 | 10.90 | 11.00 | 10.30 | 13.80 | 20.00 | 25.40 | 23.00 | 18.50 | 10.50 | 43.01                                  | 27.30 |
| Oreg.   | 2.00                       | 1.95  | 1.80  | 1.72  | 2.25  | 2.30  | 12.78                         | 8.30  | 9.00  | 9.20  | 9.50  | 10.90 | 17.50 | 20.00 | 19.10 | 14.50 | 9.80  | 32.12                                  | 22.54 |
| Calif.  | 2.03                       | 2.00  | 1.25  | 2.25  | 2.30  | 2.55  | 14.66                         | 13.70 | 13.50 | 8.20  | 11.20 | 12.60 | 19.20 | 20.00 | 17.20 | 20.00 | 11.00 | 34.03                                  | 25.85 |
| U. S.   | 1.46                       | 1.51  | 1.37  | 1.52  | 1.51  | 1.39  | 14.44                         | 11.79 | 12.43 | 11.12 | 10.63 | 11.22 | 17.09 | 20.13 | 20.08 | 17.76 | 12.13 | 25.83                                  | 16.85 |

<sup>1</sup> Based upon farm price Dec. 1.

HAY—Continued.

TABLE 144.—Wild, salt, and prairie hay: Acreage, production, and value, United States, 1909–1921.

[000 omitted.]

| Year.                   | Acreage. | Yield per acre | Production. | Farm price per ton. | Farm value. | Year.     | Acreage. | Yield per acre | Production. | Farm price per ton. | Farm value. |
|-------------------------|----------|----------------|-------------|---------------------|-------------|-----------|----------|----------------|-------------|---------------------|-------------|
|                         | Acres.   | Tons.          | Tons.       | Dolls.              | Dolls.      |           | Acres.   | Tons.          | Tons.       | Dolls.              | Dolls.      |
| 1909 <sup>1</sup> ..... | 17,186   | 1.07           | 18,383      | .....               | .....       | 1916..... | 16,635   | 1.19           | 19,806      | 7.00                | 156,503     |
| 1910.....               | 17,187   | .77            | 13,151      | .....               | .....       | 1917..... | 16,212   | .93            | 15,131      | 13.49               | 204,086     |
| 1911.....               | 17,187   | .71            | 12,155      | .....               | .....       | 1918..... | 15,365   | .94            | 14,479      | 15.23               | 220,487     |
| 1912.....               | 17,427   | 1.04           | 18,043      | .....               | .....       | 1919..... | 17,150   | 1.07           | 18,401      | 16.50               | 303,639     |
| 1913.....               | 16,341   | .92            | 15,063      | .....               | .....       | 1920..... | 15,787   | 1.11           | 17,460      | 11.35               | 198,115     |
| 1914.....               | 16,752   | 1.11           | 18,615      | .....               | .....       | 1921..... | 15,483   | .98            | 15,235      | 6.63                | 101,083     |
| 1915.....               | 16,796   | 1.27           | 21,343      | 6.80                | 145,125     |           |          |                |             |                     |             |

<sup>1</sup> Census figures.

TABLE 145.—Hay: Farm price per ton, 1st of each month, 1908–1921.

| Year.                   | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1.  | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. | Yearly average. |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|-----------------|
| 1908.....               | \$11.28 | \$11.20 | \$11.02 | \$10.83 | \$10.78 | \$10.66 | \$9.79  | \$9.28  | \$9.18   | \$9.23  | \$9.22  | \$9.02  | 10.03           |
| 1909.....               | 9.09    | 9.27    | 9.47    | 9.65    | 10.12   | 10.70   | 10.50   | 9.74    | 9.67     | 10.03   | 10.35   | 10.50   | 9.93            |
| 1910.....               | 10.45   | 11.34   | 11.61   | 11.53   | 11.08   | 10.84   | 10.75   | 10.75   | 11.21    | 11.12   | 11.20   | 12.14   | 11.19           |
| 1911.....               | 11.69   | 11.80   | 11.57   | 11.36   | 11.69   | 12.38   | 13.19   | 13.83   | 13.63    | 13.53   | 13.61   | 14.29   | 12.83           |
| 1912.....               | 13.75   | 14.39   | 14.66   | 15.64   | 16.31   | 16.22   | 14.32   | 12.03   | 11.21    | 11.02   | 11.08   | 11.79   | 13.24           |
| 1913.....               | 11.11   | 10.86   | 10.61   | 10.43   | 10.42   | 10.55   | 10.47   | 10.43   | 11.04    | 11.45   | 11.51   | 12.43   | 11.02           |
| 1914.....               | 11.70   | 11.67   | 11.69   | 11.52   | 11.63   | 11.64   | 11.29   | 10.76   | 11.10    | 10.96   | 10.78   | 11.12   | 11.23           |
| 1915.....               | 10.47   | 10.83   | 10.89   | 10.98   | 11.03   | 11.16   | 10.85   | 10.19   | 9.95     | 9.83    | 9.98    | 10.63   | 10.50           |
| 1916.....               | 10.07   | 10.55   | 10.75   | 10.85   | 11.27   | 11.47   | 11.10   | 9.89    | 9.72     | 9.65    | 9.99    | 11.22   | 10.43           |
| 1917.....               | 10.86   | 11.34   | 11.54   | 12.53   | 13.94   | 14.68   | 13.96   | 12.90   | 13.26    | 13.83   | 15.16   | 17.09   | 13.53           |
| 1918.....               | 18.09   | 18.88   | 19.14   | 18.68   | 17.97   | 17.13   | 16.07   | 15.92   | 17.42    | 18.45   | 19.27   | 20.13   | 18.19           |
| 1919.....               | 19.92   | 19.79   | 19.82   | 20.52   | 22.31   | 23.30   | 21.73   | 20.16   | 20.52    | 19.79   | 19.86   | 20.08   | 20.45           |
| 1920.....               | 20.55   | 21.76   | 22.31   | 22.94   | 24.22   | 24.86   | 23.62   | 20.89   | 19.83    | 18.64   | 17.45   | 17.76   | 20.86           |
| 1921.....               | 16.16   | 15.24   | 14.28   | 13.61   | 13.08   | 12.52   | 12.61   | 11.73   | 11.70    | 11.36   | 11.13   | 12.13   | 12.87           |
| Average, 1912–1921..... | 14.27   | 14.53   | 14.57   | 14.77   | 15.22   | 15.35   | 14.60   | 13.49   | 13.58    | 13.44   | 13.57   | 14.44   | 14.24           |

TABLE 146.—Timothy and clover hay: Farm price per ton, 15th of each month, 1917–1921.

| Date.         | Timothy. |         |         |         |         | Clover. |         |         |         |         |
|---------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|               | 1917     | 1918    | 1919    | 1920    | 1921    | 1917    | 1918    | 1919    | 1920    | 1921    |
| Jan. 15.....  | \$12.61  | \$21.37 | \$23.43 | \$24.59 | \$19.88 | \$11.38 | \$19.82 | \$21.69 | \$23.78 | \$19.17 |
| Feb. 15.....  | 12.91    | 22.25   | 22.69   | 25.49   | 18.30   | 11.65   | 21.11   | 21.11   | 24.04   | 17.39   |
| Mar. 15.....  | 13.20    | 22.53   | 22.68   | 26.75   | 17.04   | 11.90   | 21.37   | 21.25   | 26.13   | 16.44   |
| Apr. 15.....  | 14.26    | 21.47   | 24.74   | 27.99   | 16.09   | 13.06   | 19.68   | 23.36   | 26.93   | 15.47   |
| May 15.....   | 15.31    | 20.40   | 27.27   | 29.92   | 15.44   | 13.94   | 18.30   | 25.38   | 28.31   | 14.90   |
| June 15.....  | 15.76    | 18.55   | 27.50   | 30.05   | 15.16   | 14.22   | 16.64   | 25.48   | 27.80   | 14.52   |
| July 15.....  | 14.68    | 17.61   | 24.22   | 26.59   | 14.51   | 12.95   | 15.73   | 22.02   | 24.62   | 13.89   |
| Aug. 15.....  | 14.11    | 18.98   | 23.89   | 24.35   | 15.01   | 12.76   | 17.18   | 21.58   | 22.82   | 14.17   |
| Sept. 15..... | 14.89    | 20.85   | 23.65   | 24.15   | 14.83   | 13.79   | 19.27   | 21.74   | 22.57   | 14.37   |
| Oct. 15.....  | 16.23    | 22.60   | 23.04   | 22.74   | 14.39   | 15.01   | 20.60   | 21.17   | 21.29   | 13.99   |
| Nov. 15.....  | 18.33    | 22.93   | 22.90   | 22.09   | 14.22   | 17.14   | 21.13   | 21.61   | 20.60   | 13.53   |
| Dec. 15.....  | 20.31    | 22.94   | 23.71   | 21.22   | 14.31   | 18.67   | 21.26   | 22.60   | 19.96   | 14.17   |

## HAY—Continued.

TABLE 147.—*Alfalfa and prairie hay: Farm price per ton, 15th of each month, 1917–1921.*

| Date.         | Alfalfa. |         |         |         |         | Prairie. |         |         |         |         |
|---------------|----------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
|               | 1917     | 1918    | 1919    | 1920    | 1921    | 1917     | 1918    | 1919    | 1920    | 1921    |
| Jan. 15.....  | \$12.79  | \$21.27 | \$20.42 | \$24.13 | \$14.93 | \$8.88   | \$15.39 | \$16.33 | \$17.54 | \$10.20 |
| Feb. 15.....  | 13.63    | 21.38   | 20.91   | 24.41   | 13.55   | 8.60     | 15.74   | 16.55   | 17.36   | 9.45    |
| Mar. 15.....  | 14.68    | 20.82   | 21.40   | 24.68   | 12.88   | 9.32     | 15.47   | 17.38   | 16.52   | 8.70    |
| Apr. 15.....  | 17.68    | 18.97   | 22.28   | 24.57   | 11.35   | 10.94    | 14.47   | 18.85   | 16.66   | 8.43    |
| May 15.....   | 17.92    | 17.84   | 23.32   | 25.68   | 10.88   | 12.02    | 12.75   | 20.22   | 18.06   | 8.05    |
| June 15.....  | 16.77    | 16.74   | 20.89   | 24.20   | 10.64   | 11.84    | 12.78   | 18.71   | 17.59   | 8.02    |
| July 15.....  | 14.13    | 16.58   | 20.15   | 21.70   | 9.85    | 10.11    | 12.51   | 16.10   | 15.38   | 7.67    |
| Aug. 15.....  | 15.28    | 18.22   | 20.72   | 20.43   | 9.66    | 10.52    | 13.26   | 16.10   | 13.74   | 7.59    |
| Sept. 15..... | 16.33    | 19.72   | 20.89   | 19.12   | 9.86    | 11.40    | 14.35   | 15.90   | 12.98   | 7.52    |
| Oct. 15.....  | 17.59    | 20.23   | 20.56   | 18.03   | 8.92    | 12.29    | 15.06   | 15.88   | 11.53   | 6.78    |
| Nov. 15.....  | 19.19    | 20.42   | 21.63   | 12.88   | 9.67    | 13.52    | 15.47   | 16.91   | 11.47   | 7.49    |
| Dec. 15.....  | 20.39    | 20.74   | 22.95   | 16.59   | 10.46   | 14.91    | 16.80   | 17.19   | 10.80   | 7.47    |

TABLE 148.—*Hay: Extent and causes of yearly crop losses, 1909–1920.*

| Year.        | Deficient moisture. | Excessive moisture. | Floods.          | Frost or freeze. | Hail. | Hot winds. | Storms.          | Total climatic. | Plant disease.   | Insect pests. | Animal pests.    | Defective seed.  | Total. |
|--------------|---------------------|---------------------|------------------|------------------|-------|------------|------------------|-----------------|------------------|---------------|------------------|------------------|--------|
|              | P.ct.               | P.ct.               | P.ct.            | P.ct.            | P.ct. | P.ct.      | P.ct.            | P.ct.           | P.ct.            | P.ct.         | P.ct.            | P.ct.            | P.ct.  |
| 1920.....    | 7.2                 | 1.4                 | 0.2              | 0.4              | 0.2   | 0.2        | 0.1              | 10.7            | 0.2              | 1.0           | 0.1              | 0.1              | 12.7   |
| 1919.....    | 9.9                 | 1.9                 | .3               | 1.0              | .1    | .4         | .1               | 13.9            | .1               | 1.0           | ( <sup>1</sup> ) | .1               | 15.5   |
| 1918.....    | 17.5                | .7                  | .2               | 2.7              | .1    | .3         | .1               | 22.7            | .1               | .9            | .1               | ( <sup>1</sup> ) | 24.9   |
| 1917.....    | 11.5                | 1.3                 | .2               | 2.9              | .2    | .3         | .1               | 16.8            | .1               | .4            | .1               | ( <sup>1</sup> ) | 18.3   |
| 1916.....    | 5.6                 | 1.0                 | .3               | 1.1              | .1    | .2         | .1               | 8.6             | ( <sup>1</sup> ) | .3            | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 9.6    |
| 1915.....    | 5.7                 | 4.9                 | .6               | 1.8              | .1    | .1         | .3               | 11.9            | .2               | .5            | .1               | ( <sup>1</sup> ) | 13.9   |
| 1914.....    | 27.7                | .8                  | ( <sup>1</sup> ) | .9               | .1    | 1.9        | ( <sup>1</sup> ) | 31.9            | .1               | .6            | .1               | .1               | 34.7   |
| 1913.....    | 17.4                | 1.2                 | .3               | 1.2              | .1    | .5         | .1               | 21.2            | .1               | .5            | .2               | .1               | 23.6   |
| 1912.....    | 10.7                | 2.2                 | .6               | 1.2              | .1    | .3         | .3               | 16.7            | .1               | .5            | .1               | .1               | 17.6   |
| Average..... | 12.3                | 1.7                 | .3               | 1.5              | .1    | .5         | .1               | 17.0            | .1               | .6            | .1               | .1               | 19.0   |

<sup>1</sup> Less than 0.05 per cent.TABLE 149.—*Hay: Monthly and yearly average price per ton, No. 1 timothy, Chicago, 1910–11 to 1921–22.<sup>1</sup>*

| Season.          | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | Crop-year average. |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910–11.....     | \$18.75 | \$19.50 | \$17.25 | \$17.25 | \$17.50 | \$17.50 | \$18.00 | \$16.25 | \$16.25 | \$17.75 | \$21.00 | \$21.75 | \$18.28            |
| 1911–12.....     | 23.50   | 21.50   | 20.00   | 20.50   | 21.25   | 21.00   | 21.75   | 20.75   | 21.50   | 24.00   | 26.00   | 21.25   | 21.92              |
| 1912–13.....     | 19.75   | 18.50   | 18.50   | 18.00   | 17.00   | 15.50   | 15.75   | 14.25   | 14.75   | 18.50   | 15.25   | 14.25   | 16.42              |
| 1913–14.....     | 15.00   | 17.75   | 17.75   | 18.00   | 17.00   | 16.25   | 15.50   | 14.75   | 15.25   | 16.00   | 16.25   | 15.25   | 16.23              |
| 1914–15.....     | 15.25   | 16.75   | 15.50   | 15.25   | 15.50   | 15.50   | 16.25   | 15.50   | 15.25   | 16.25   | 17.00   | 17.50   | 16.64              |
| 1915–16.....     | 19.25   | 20.25   | 19.00   | 17.00   | 15.50   | 15.50   | 16.25   | 15.50   | 16.75   | 18.75   | 18.75   | 18.00   | 17.54              |
| 1916–17.....     | 16.00   | 16.00   | 15.50   | 16.25   | 16.25   | 15.50   | 15.75   | 15.75   | 18.00   | 20.50   | 18.75   | 16.75   | 16.71              |
| 1917–18.....     | 17.75   | 19.25   | 21.00   | 25.00   | 27.25   | 27.00   | 28.25   | 29.00   | 28.00   | 24.00   | 23.00   | 19.00   | 24.04              |
| 1918–19.....     | 21.50   | 26.50   | 32.00   | 31.00   | 30.00   | 30.00   | 29.50   | 28.00   | 30.50   | 33.50   | 35.50   | 36.00   | 29.92              |
| 1919–20.....     | 34.50   | 35.00   | 29.00   | 28.00   | 29.50   | 30.00   | 32.50   | 34.00   | 35.25   | 43.00   | 46.50   | 42.75   | 35.00              |
| 1920–21.....     | 38.50   | 40.25   | 33.75   | 32.25   | 32.00   | 28.50   | 26.90   | 24.40   | 25.30   | 23.80   | 21.90   | 22.50   | 29.17              |
| 1921–22.....     | 24.40   | 24.00   | 24.20   | 22.60   | 22.90   | 21.90   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average. | 21.89   | 22.84   | 21.75   | 21.68   | 21.70   | 21.18   | 21.47   | 20.56   | 21.32   | 22.78   | 23.79   | 22.18   | 21.93              |

<sup>1</sup> From Chicago Board of Trade and Daily Trade Bulletin.

## HAY—Continued.

TABLE 150.—Hay: Monthly and yearly average price per ton, No. 1 alfalfa, Kansas City, 1910-11 to 1921-22.<sup>1</sup>

| Season.          | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | Crop-year average. |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910-11.....     | \$12.08 | \$13.50 | \$13.89 | \$14.25 | \$14.25 | \$14.23 | \$13.51 | \$12.93 | \$13.07 | \$13.67 | \$13.29 | \$12.38 | \$13.49            |
| 1911-12.....     | 15.13   | 14.44   | 14.87   | 15.00   | 15.27   | 15.50   | 17.72   | 18.37   | 20.49   | 22.73   | 19.34   | 11.62   | 16.71              |
| 1912-13.....     | 12.59   | 13.09   | 13.58   | 15.11   | 15.11   | 15.00   | 14.79   | 12.86   | 14.06   | 13.75   | 13.28   | 10.70   | 13.65              |
| 1913-14.....     | 12.12   | 14.80   | 16.14   | 16.54   | 16.00   | 16.01   | 15.96   | 15.25   | 15.18   | 15.30   | 15.54   | 14.23   | 15.26              |
| 1914-15.....     | 12.38   | 13.42   | 13.33   | 12.51   | 13.21   | 13.79   | 13.75   | 13.73   | 14.75   | 15.11   | 13.73   | 13.42   | 13.59              |
| 1915-16.....     | 11.54   | 11.90   | 12.25   | 13.11   | 12.83   | 14.35   | 14.54   | 15.34   | 13.92   | 14.44   | 14.45   | 11.42   | 13.34              |
| 1916-17.....     | 11.29   | 13.40   | 13.58   | 15.68   | 18.50   | 19.33   | 19.81   | 20.25   | 21.10   | 24.23   | 24.52   | 21.87   | 18.64              |
| 1917-18.....     | 21.18   | 24.09   | 24.07   | 27.43   | 31.10   | 32.76   | 30.01   | 31.33   | 27.56   | 24.11   | 22.64   | 20.57   | 26.40              |
| 1918-19.....     | 22.60   | 29.08   | 31.45   | 30.14   | 31.21   | 31.01   | 32.85   | 31.01   | 34.56   | 37.99   | 36.20   | 36.43   | 32.04              |
| 1919-20.....     | 26.93   | 27.63   | 24.96   | 30.24   | 33.39   | 35.10   | 35.75   | 34.83   | 33.79   | 34.10   | 35.46   | 31.75   | 31.99              |
| 1920-21.....     | 27.21   | 29.49   | 27.22   | 23.95   | 25.05   | 23.01   | 23.30   | 20.30   | 20.30   | 21.00   | 22.20   | 13.40   | 23.45              |
| 1921-22.....     | 17.50   | 19.00   | 17.20   | 19.80   | 20.40   | 19.60   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average. | 16.82   | 18.61   | 18.66   | 19.45   | 20.54   | 20.92   | 21.09   | 20.56   | 20.80   | 21.49   | 20.97   | 18.44   | 19.86              |

<sup>1</sup> From Kansas City Daily Price Current and Kansas City Grain Market Review.TABLE 151.—Hay: Monthly and yearly average price per ton, No. 1 prairie, Kansas City, 1910-11 to 1921-22.<sup>1</sup>

| Season.          | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | Crop-year average. |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910-11.....     | \$10.83 | \$10.82 | \$11.67 | \$11.34 | \$11.16 | \$10.86 | \$11.07 | \$10.95 | \$10.84 | \$11.31 | \$11.55 | \$13.61 | \$11.33            |
| 1911-12.....     | 15.93   | 12.93   | 11.50   | 11.69   | 12.07   | 12.61   | 13.84   | 13.66   | 16.70   | 20.85   | 20.43   | 15.16   | 14.73              |
| 1912-13.....     | 8.79    | 7.96    | 8.39    | 8.96    | 8.91    | 9.39    | 10.43   | 9.37    | 9.19    | 9.56    | 9.53    | 9.97    | 9.21               |
| 1913-14.....     | 10.60   | 13.62   | 15.76   | 16.00   | 15.66   | 15.57   | 14.20   | 14.50   | 14.40   | 16.00   | 16.42   | 15.43   | 14.85              |
| 1914-15.....     | 12.10   | 9.96    | 11.58   | 11.35   | 10.94   | 10.98   | 11.25   | 10.89   | 11.26   | 11.41   | 11.02   | 11.03   | 11.15              |
| 1915-16.....     | 11.32   | 8.65    | 8.63    | 9.71    | 9.54    | 8.97    | 8.84    | 9.15    | 8.96    | 9.50    | 9.74    | 8.65    | 9.91               |
| 1916-17.....     | 8.50    | 8.06    | 9.36    | 9.47    | 10.74   | 11.15   | 10.57   | 10.92   | 12.92   | 18.68   | 19.74   | 20.57   | 12.56              |
| 1917-18.....     | 18.14   | 18.57   | 18.06   | 19.60   | 25.07   | 25.47   | 24.00   | 23.79   | 23.42   | 21.13   | 19.17   | 17.66   | 21.17              |
| 1918-19.....     | 19.26   | 25.25   | 26.57   | 27.58   | 26.34   | 24.04   | 23.25   | 26.82   | 32.85   | 36.63   | 39.01   | 37.34   | 29.15              |
| 1919-20.....     | 20.89   | 19.98   | 19.32   | 19.75   | 21.12   | 25.34   | 21.40   | 20.68   | 20.61   | 21.70   | 24.02   | 18.95   | 21.15              |
| 1920-21.....     | 17.21   | 19.52   | 18.47   | 16.45   | 16.13   | 14.49   | 14.00   | 13.10   | 14.10   | 13.70   | 14.10   | 13.40   | 15.39              |
| 1921-22.....     | 12.30   | 11.40   | 11.30   | 12.40   | 12.00   | 11.30   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average. | 13.96   | 14.12   | 14.48   | 14.71   | 15.29   | 15.35   | 15.26   | 14.89   | 15.89   | 17.32   | 17.70   | 16.52   | 15.46              |

<sup>1</sup> From Kansas City Daily Price Current and Kansas City Grain Market Review.

## HAY—Continued.

TABLE 152.—Hay: Monthly and yearly receipts, in tons, 1910-11 to 1921-22.

| Crop year.     | Baltimore. | Boston. | Chicago. | Kansas City. | Milwaukee. | Minneapolis. | New York. | Peoria. | Philadelphia. | Pittsburgh. | St. Louis. | San Francisco. | Total.    |
|----------------|------------|---------|----------|--------------|------------|--------------|-----------|---------|---------------|-------------|------------|----------------|-----------|
| 1910-11.....   | 68,589     | 162,420 | 273,983  | 308,940      | 38,313     | 66,306       | 336,471   | 37,419  | 86,851        | 119,635     | 253,540    | 184,594        | 1,937,111 |
| 1911-12.....   | 69,284     | 164,196 | 351,630  | 318,948      | 44,199     | 63,570       | 286,474   | 41,822  | 96,484        | 115,608     | 258,462    | 147,483        | 1,956,160 |
| 1912-13.....   | 58,986     | 139,920 | 274,769  | 343,392      | 47,138     | 37,290       | 296,866   | 38,181  | 82,063        | 106,993     | 222,998    | 141,224        | 1,789,723 |
| 1913-14.....   | 68,186     | 117,740 | 369,082  | 285,283      | 36,283     | 38,280       | 317,543   | 43,680  | 75,680        | 103,466     | 201,155    | 133,598        | 1,844,861 |
| 1914-15.....   | 54,904     | 115,161 | 325,095  | 398,604      | 45,060     | 45,513       | 330,098   | 33,957  | 78,583        | 83,923      | 308,727    | 161,750        | 1,981,375 |
| 1915-16.....   | 50,416     | 126,590 | 278,181  | 398,172      | 34,637     | 45,376       | 294,395   | 51,299  | 84,006        | 106,710     | 232,628    | 146,560        | 1,848,969 |
| 1916-17.....   | 50,874     | 123,780 | 297,982  | 359,316      | 24,360     | 38,652       | 212,280   | 48,870  | 78,284        | 92,202      | 210,591    | 104,468        | 1,578,586 |
| 1917-18.....   | 64,053     | 97,150  | 352,730  | 419,964      | 23,151     | 39,120       | 193,727   | 40,250  | 61,618        | 74,075      | 237,506    | 82,460         | 1,691,790 |
| 1918-19.....   | 41,870     | 67,000  | 237,031  | 338,460      | 16,856     | 28,457       | 221,580   | 35,050  | 31,571        | 72,721      | 213,043    | 72,440         | 1,473,879 |
| 1919-20.....   | 32,650     | 58,740  | 225,050  | 598,340      | 19,053     | 22,601       | 167,088   | 33,306  | 52,466        | 63,680      | 254,042    | 85,807         | 1,613,823 |
| 1920-21.....   | 19,559     | 50,220  | 149,801  | 337,169      | 19,466     | 23,015       | 150,338   | 21,140  | 40,057        | 79,062      | 188,550    | 75,272         | 1,153,649 |
| 11-yr. av..... | 52,211     | 111,174 | 283,653  | 377,781      | 31,663     | 40,472       | 255,712   | 38,628  | 69,783        | 92,557      | 239,931    | 121,423        | 1,714,993 |
| 1920-21.....   |            |         |          |              |            |              |           |         |               |             |            |                |           |
| 1920:          |            |         |          |              |            |              |           |         |               |             |            |                |           |
| July.....      | 2,664      | 4,740   | 12,605   | 36,468       | 1,340      | 1,484        | 20,566    | 2,080   | 2,808         | 6,511       | 16,997     | 9,524          | 117,767   |
| Aug.....       | 1,630      | 3,640   | 8,667    | 44,028       | 1,047      | 1,583        | 12,477    | 4,450   | 4,980         | 7,980       | 18,091     | 14,161         | 121,014   |
| Sept.....      | 1,496      | 3,220   | 9,872    | 47,820       | 1,622      | 1,357        | 14,940    | 5,870   | 3,624         | 4,530       | 25,256     | 9,127          | 128,734   |
| Oct.....       | 1,778      | 5,780   | 12,957   | 22,512       | 2,094      | 2,072        | 17,108    | 2,090   | 4,283         | 7,474       | 14,304     | 5,620          | 97,972    |
| Nov.....       | 1,179      | 3,870   | 12,269   | 35,184       | 2,150      | 2,161        | 18,553    | 1,670   | 3,444         | 7,680       | 16,860     | 6,675          | 111,645   |
| Dec.....       | 2,308      | 3,500   | 19,969   | 27,156       | 1,641      | 2,707        | 12,486    | 1,060   | 3,640         | 8,586       | 17,784     | 4,730          | 105,467   |
| 1921:          |            |         |          |              |            |              |           |         |               |             |            |                |           |
| Jan.....       | 1,788      | 3,890   | 20,784   | 29,535       | 2,135      | 2,791        | 10,844    | 950     | 3,000         | 5,699       | 14,636     | 3,148          | 99,178    |
| Feb.....       | 1,697      | 3,790   | 10,621   | 38,874       | 1,620      | 2,006        | 7,265     | 840     | 2,388         | 6,716       | 17,267     | 3,920          | 96,904    |
| Mar.....       | 1,195      | 5,350   | 9,897    | 26,553       | 1,473      | 2,299        | 8,974     | 960     | 2,470         | 6,408       | 20,327     | 6,065          | 90,971    |
| Apr.....       | 1,023      | 2,910   | 11,147   | 12,961       | 1,584      | 1,679        | 8,474     | 440     | 2,850         | 5,892       | 9,662      | 4,049          | 62,677    |
| May.....       | 1,889      | 4,780   | 11,206   | 11,281       | 1,764      | 1,294        | 10,502    | 400     | 3,684         | 6,864       | 8,945      | 3,791          | 66,394    |
| June.....      | 1,038      | 4,750   | 11,807   | 5,797        | 996        | 1,802        | 8,149     | 360     | 2,880         | 4,822       | 8,571      | 4,464          | 54,926    |
| Total.....     | 19,559     | 50,220  | 149,801  | 337,169      | 19,466     | 23,015       | 150,338   | 21,140  | 40,057        | 79,062      | 188,550    | 75,272         | 1,153,649 |
| 1921-22.....   |            |         |          |              |            |              |           |         |               |             |            |                |           |
| 1921:          |            |         |          |              |            |              |           |         |               |             |            |                |           |
| July.....      | 928        | 3,030   | 9,508    | 12,001       | 600        | 883          | 9,474     | 240     | 2,100         | 1,848       | 7,525      | 6,035          | 54,172    |
| Aug.....       | 1,251      | 5,790   | 14,021   | 14,201       | 1,032      | 1,058        | 8,770     | 690     | 2,520         | 6,336       | 9,833      | 12,938         | 79,340    |
| Sept.....      | 974        | 5,200   | 4,977    | 11,143       | 1,380      | 1,398        | 8,468     | 440     | 2,412         | 5,238       | 9,636      | 5,939          | 57,230    |
| Oct.....       | 1,122      | 2,390   | 13,453   | 14,674       | 1,698      | 2,659        | 9,979     | 710     | 4,488         | 6,288       | 11,690     | 4,734          | 73,782    |
| Nov.....       | 815        | 7,450   | 9,590    | 15,637       | 1,978      | 1,793        | 9,827     | 980     | 3,900         | 11,436      | 11,729     | 3,674          | 78,809    |
| Dec.....       | 1,182      | 2,110   | 14,614   | 13,354       | 1,620      | 2,291        | 7,156     | 680     | 4,696         | 4,684       | 9,974      | 2,876          | 65,417    |
| Total.....     | 6,272      | 25,970  | 66,163   | 81,010       | 8,605      | 10,977       | 53,674    | 3,720   | 20,016        | 35,860      | 60,287     | 36,196         | 408,750   |

Sources: Hay Trade Journal, Annual Report of the San Francisco Merchants' Exchange, Minneapolis Chamber of Commerce Report, Minneapolis Daily Market Report.

## HAY—Continued.

TABLE 153.—Hay: Monthly and yearly shipments, in tons, 1910-11 to 1921-22.

| Crop year.           | Balti-<br>more. | Chi-<br>cago. | Kansas<br>City. | Mil-<br>wau-<br>kee. | Minne-<br>apolis. | Peoria. | Pitts-<br>burgh. | St.<br>Louis. | Total.  |
|----------------------|-----------------|---------------|-----------------|----------------------|-------------------|---------|------------------|---------------|---------|
| 1910-11.....         | 11,864          | 18,011        | 93,828          | 5,958                | 31,350            | 10,373  | 76,631           | 112,435       | 360,450 |
| 1911-12.....         | 13,257          | 49,190        | 58,896          | 4,445                | 28,910            | 17,222  | 75,420           | 146,285       | 393,595 |
| 1912-13.....         | 8,313           | 22,681        | 85,176          | 3,159                | 4,820             | 7,819   | 65,800           | 105,533       | 308,301 |
| 1913-14.....         | 8,995           | 39,184        | 78,756          | 9,718                | 5,500             | 16,077  | 65,148           | 139,376       | 362,754 |
| 1914-15.....         | 8,896           | 83,414        | 67,608          | 17,306               | 5,390             | 19,788  | 37,512           | 172,590       | 412,504 |
| 1915-16.....         | 9,631           | 55,791        | 73,668          | 6,841                | 4,156             | 9,676   | 87,216           | 90,415        | 337,444 |
| 1916-17.....         | 13,657          | 33,439        | 138,432         | 5,765                | 4,351             | 15,334  | 55,032           | 103,990       | 369,990 |
| 1917-18.....         | 26,913          | 62,665        | 222,912         | 5,293                | 7,042             | 10,621  | 20,536           | 177,240       | 533,222 |
| 1918-19.....         | 20,221          | 52,802        | 143,040         | 2,986                | 4,147             | 7,650   | 23,511           | 119,625       | 373,982 |
| 1919-20.....         | 4,118           | 32,637        | 276,492         | 5,270                | 6,925             | 6,151   | 26,267           | 111,695       | 469,555 |
| 1920-21.....         |                 | 18,631        | 153,648         | 3,863                | 2,020             | 7,100   | 40,450           | 63,250        | 288,992 |
| 11-year average..... | 11,447          | 42,583        | 126,587         | 6,419                | 9,510             | 11,618  | 52,141           | 122,039       | 382,344 |
| 1920-21:             |                 |               |                 |                      |                   |         |                  |               |         |
| July.....            |                 | 2,037         | 15,456          | 768                  | 171               | 500     | 4,960            | 3,580         | 27,412  |
| August.....          |                 | 1,097         | 16,956          | 283                  | 208               | 260     | 1,970            | 4,365         | 25,174  |
| September.....       |                 | 2,377         | 16,680          | 490                  | 109               | 1,470   | 4,955            | 8,885         | 34,046  |
| October.....         |                 | 1,446         | 8,376           | 264                  | 122               | 570     | 2,400            | 6,030         | 19,508  |
| November.....        |                 | 1,325         | 11,388          | 288                  | 57                | 790     | 9,450            | 4,070         | 27,368  |
| December.....        |                 | 1,701         | 14,856          | 168                  | 256               | 740     | 3,854            | 7,235         | 28,890  |
| January.....         |                 | 2,266         | 20,904          | 180                  | 219               | 870     | 2,310            | 6,930         | 33,679  |
| February.....        |                 | 1,435         | 23,568          | 180                  | 193               | 370     | 3,509            | 7,460         | 36,715  |
| March.....           |                 | 2,209         | 13,332          | 302                  | 160               | 710     | 3,422            | 7,395         | 27,530  |
| April.....           |                 | 1,891         | 6,396           | 228                  | 282               | 150     | 2,180            | 2,745         | 13,372  |
| May.....             |                 | 624           | 3,696           | 383                  | 181               | 150     | 1,290            | 2,445         | 8,769   |
| June.....            |                 | 663           | 2,040           | 324                  | 62                | 230     | 1,050            | 2,170         | 6,529   |
| Total.....           |                 | 18,631        | 153,648         | 3,863                | 2,020             | 7,100   | 40,450           | 63,250        | 288,992 |
| 1921-22:             |                 |               |                 |                      |                   |         |                  |               |         |
| July.....            |                 | 184           | 4,500           | 360                  | 140               | 110     | 680              | 3,010         | 8,984   |
| August.....          |                 | 808           | 1,548           | 441                  | 94                | 220     | 1,710            | 2,780         | 7,596   |
| September.....       |                 | 731           | 1,020           | 648                  | 117               | 200     | 930              | 4,560         | 8,196   |
| October.....         |                 | 550           | 2,124           | 742                  | 137               | 390     | 6,140            | 2,600         | 12,663  |
| November.....        |                 | 418           | 2,328           | 600                  | 72                | 370     | 5,369            | 2,460         | 11,617  |
| December.....        |                 | 577           | 3,576           | 466                  | 226               | 290     | 926              | 2,555         | 8,626   |
| Total.....           |                 | 3,263         | 15,096          | 3,257                | 786               | 1,580   | 15,755           | 17,965        | 57,702  |

Sources: Hay Trade Journal; Peoria Board of Trade Report, Annual Report of the Kansas City Board of Trade, Daily Trade Bulletin, Kansas City Grain Market Review, Minneapolis Daily Market Record.

## FEED.

TABLE 154.—Feed: Monthly and yearly average price per ton at Minneapolis, 1916 to 1921.<sup>1</sup>

| Year.           | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Yearly<br>aver-<br>age. |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------------------|
| Brand:          |         |         |         |         |         |         |         |         |         |         |         |         |                         |
| 1916.....       | \$18.78 | \$20.10 | \$18.54 | \$18.63 | \$19.05 | \$18.32 | \$17.69 | \$20.03 | \$21.71 | \$24.50 | \$27.08 | \$25.93 | \$20.87                 |
| 1917.....       | 28.75   | 32.55   | 34.20   | 38.54   | 33.77   | 26.97   | 32.15   | 31.83   | 30.28   | 30.55   | 33.46   | 38.02   | 32.59                   |
| 1918.....       | 32.50   | 32.50   | 32.55   | 33.04   | 31.27   | 30.74   | 26.00   | 29.31   | 29.06   | 28.45   | 27.80   | 33.49   | 30.63                   |
| 1919.....       | 47.26   | 42.33   | 38.09   | 39.78   | 37.39   | 34.20   | 37.41   | 40.38   | 37.49   | 36.32   | 37.94   | 41.50   | 39.26                   |
| 1920.....       | 41.98   | 42.68   | 46.69   | 50.26   | 53.25   | 50.78   | 47.83   | 41.88   | 38.42   | 30.63   | 31.85   | 28.23   | 42.04                   |
| 1921.....       | 25.93   | 21.44   | 21.64   | 16.41   | 15.97   | 14.80   | 14.06   | 13.93   | 12.97   | 12.15   | 14.79   | 20.63   | 17.06                   |
| 6-year average. | 32.53   | 32.02   | 32.00   | 32.78   | 31.78   | 29.30   | 29.19   | 29.56   | 28.32   | 27.18   | 28.82   | 31.30   | 30.40                   |
| Middlings:      |         |         |         |         |         |         |         |         |         |         |         |         |                         |
| 1916.....       | 19.41   | 21.61   | 20.22   | 19.50   | 20.06   | 20.10   | 19.88   | 21.48   | 22.50   | 27.19   | 30.81   | 27.88   | 22.56                   |
| 1917.....       | 28.53   | 32.55   | 34.20   | 39.50   | 35.15   | 33.27   | 41.90   | 41.78   | 35.09   | 36.25   | 37.40   | 39.05   | 36.33                   |
| 1918.....       | 34.50   | 34.50   | 34.85   | 35.04   | 33.27   | 32.69   | 27.61   | 31.00   | 30.30   | 30.77   | 30.09   | 36.27   | 32.63                   |
| 1919.....       | 43.84   | 44.14   | 38.56   | 40.74   | 44.81   | 42.90   | 47.22   | 58.08   | 51.46   | 44.44   | 41.22   | 43.13   | 45.06                   |
| 1920.....       | 43.97   | 47.28   | 51.57   | 54.88   | 57.77   | 56.06   | 54.22   | 52.56   | 45.65   | 30.62   | 28.80   | 23.94   | 45.62                   |
| 1921.....       | 23.47   | 20.91   | 20.95   | 15.38   | 15.29   | 14.83   | 14.07   | 14.64   | 13.97   | 13.16   | 15.35   | 20.73   | 16.59                   |
| 6-year average. | 33.17   | 33.50   | 33.38   | 34.18   | 34.56   | 33.31   | 34.15   | 35.76   | 33.26   | 30.40   | 30.62   | 31.83   | 33.18                   |

<sup>1</sup> Compiled from Minneapolis Daily Market Record.



## FEED—Continued.

TABLE 155.—*Feed: Monthly and yearly average price per ton, oil meal, New York, 1910-11 to 1921-22.*<sup>1</sup>

| Season.          | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Crop-year average. |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910-11.....     | \$37.46 | \$36.90 | \$35.50 | \$35.50 | \$35.50 | \$35.50 | \$35.50 | \$34.12 | \$33.75 | \$33.50 | \$34.33 | \$35.71 | \$35.27            |
| 1911-12.....     | 40.00   | 40.75   | 40.12   | 39.00   | 39.65   | 40.17   | 39.75   | 38.80   | 38.10   | 37.30   | 36.57   | 35.50   | 38.81              |
| 1912-13.....     | 35.35   | 35.30   | 34.88   | 32.75   | 32.34   | 31.90   | 29.20   | 27.86   | 28.12   | 28.25   | 29.40   | 30.12   | 31.25              |
| 1913-14.....     | 32.50   | 32.00   | 31.40   | 31.25   | 31.25   | 31.35   | 31.25   | 31.50   | 31.50   | 32.27   | 32.80   | 34.60   | 31.97              |
| 1914-15.....     | 33.62   | 32.83   | 32.75   | 35.10   | 38.75   | 41.00   | 37.13   | 35.50   | 32.50   | 32.50   | 35.31   | 37.71   | 35.39              |
| 1915-16.....     | 39.70   | 35.75   | 38.50   | 40.50   | 40.60   | 39.50   | 36.63   | 32.85   | 31.50   | 32.12   | 33.00   | 37.00   | 36.72              |
| 1916-17.....     | 39.50   | 42.28   | 45.45   | 47.50   | 48.50   | 48.80   | 43.33   | 47.00   | 45.44   | 48.25   | 51.08   | 53.50   | 47.53              |
| 1917-18.....     | 53.00   | 54.00   | 54.42   | 57.09   | 58.15   | 58.50   | 68.50   | 57.00   | 52.50   | 50.00   | 52.80   | 54.00   | 54.99              |
| 1918-19.....     | 55.00   | 56.00   | 55.75   | 56.50   | 62.15   | 63.35   | 65.50   | 65.50   | 70.50   | 75.50   | 82.80   | 90.25   | 66.53              |
| 1919-20.....     | 81.58   | 73.89   | 78.75   | 90.75   | 81.50   | 71.75   | 70.40   | 62.50   | 60.00   | 60.00   | 60.00   | 60.00   | 70.09              |
| 1920-21.....     | 60.00   | 50.00   | 56.50   | 52.00   | 48.38   | 43.12   | 43.75   | 45.00   | 36.25   | 37.00   | 41.60   | 46.58   | 47.65              |
| 1921-22.....     | 46.30   | 40.00   | 40.75   | 45.00   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average. | 46.16   | 45.69   | 45.80   | 46.17   | 46.98   | 45.88   | 45.09   | 43.51   | 42.20   | 42.52   | 44.47   | 46.84   | 45.11              |

<sup>1</sup> From Annual Statistical Review of New York Produce Exchange and the Oil, Paint, and Drug Reporter.TABLE 156.—*Feed: Monthly and yearly price per ton, cottonseed meal, Memphis, 1910-11 to 1921-22.*<sup>1</sup>

| Season.          | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Crop-year average. |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910-11.....     | \$26.00 | \$25.75 | \$25.38 | \$24.38 | \$24.38 | \$23.88 | \$23.25 | \$23.25 | \$23.88 | \$23.88 | \$24.50 | \$25.63 | \$24.51            |
| 1911-12.....     | 26.50   | 25.75   | 24.63   | 24.63   | 24.63   | 24.38   | 25.13   | 26.00   | 27.25   | 28.00   | 27.25   | 26.75   | 25.91              |
| 1912-13.....     | 26.75   | 25.63   | 24.88   | 24.63   | 25.50   | 25.75   | 25.13   | 25.13   | 26.75   | 28.00   | 28.75   | 30.63   | 28.42              |
| 1913-14.....     | 31.75   | 27.00   | 27.13   | 27.38   | 27.25   | 26.75   | 26.13   | 26.75   | 27.63   | 27.75   | 27.50   | 27.75   | 27.56              |
| 1914-15.....     | 28.00   | 23.75   | 22.75   | 22.38   | 23.50   | 24.75   | 27.25   | 26.88   | 26.50   | 26.00   | 25.25   | 25.13   | 25.18              |
| 1915-16.....     | 25.63   | 27.13   | 30.50   | 32.00   | 34.00   | 32.25   | 29.00   | 28.38   | 28.88   | 27.75   | 27.25   | 27.25   | 28.17              |
| 1916-17.....     | 28.25   | 30.75   | 35.25   | 39.25   | 39.00   | 37.50   | 36.25   | 36.25   | 38.50   | 39.59   | 42.25   | 44.50   | 37.37              |
| 1917-18.....     | 45.50   | 43.00   | 45.50   | 49.75   | 46.50   | 46.50   | 46.50   | 46.50   | 46.50   | 46.50   | 46.50   | 46.50   | 46.31              |
| 1918-19.....     | 46.50   | 46.50   | 46.50   | 54.00   | 54.00   | 54.00   | 54.00   | 54.00   | 54.00   | 54.00   | 59.13   | 69.75   | 53.87              |
| 1919-20.....     | 76.25   | 63.00   | 66.50   | 70.25   | 69.25   | 71.00   | 65.00   | 65.75   | 64.81   | 65.13   | 63.63   | 59.40   | 66.66              |
| 1920-21.....     | 55.00   | 51.25   | 39.50   | 34.13   | 28.00   | 28.33   | 26.50   | 25.17   | 23.50   | 22.92   | 29.75   | 34.00   | 33.57              |
| 1921-22.....     | 36.44   | 36.00   | 34.50   | 33.44   | 34.20   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average. | 37.83   | 35.41   | 35.27   | 36.62   | 36.00   | 35.92   | 34.92   | 34.91   | 35.29   | 35.95   | 36.52   | 37.94   | 36.05              |

<sup>1</sup> Figures prior to 1919 from Cotton Oil Press.

CLOVER AND TIMOTHY SEED.

TABLE 157.—Clover seed: Acreage, production, and value, by States, 1920-21, and totals, 1916-1921.

| State and year.   | Thousands of acres. |      | Average yield per acre. |      | Production (thousands of bushels). |       | Average farm price per bushel Nov. 15. |         | Total value, basis Dec. 1 price (thousands of dollars). |        |
|-------------------|---------------------|------|-------------------------|------|------------------------------------|-------|--|---------|---|--------|
|                   | 1920                | 1921 | 1920                    | 1921 | 1920                               | 1921  | 1920                                   | 1921    | 1920  | 1921   |
| New York.....     | 11                  | 9    | 2.4                     | 1.9  | 26                                 | 17    | \$13.00                                | \$13.00 | 338   | 221    |
| Pennsylvania..... | 22                  | 18   | 1.6                     | 1.4  | 35                                 | 25    | 12.90                                  | 10.25   | 452   | 256    |
| Ohio.....         | 195                 | 172  | 1.3                     | 1.3  | 254                                | 224   | 12.30                                  | 10.70   | 3,124   | 2,397  |
| Indiana.....      | 95                  | 57   | 1.5                     | 1.2  | 142                                | 68    | 10.90                                  | 10.30   | 1,545   | 700    |
| Illinois.....     | 196                 | 143  | 1.7                     | 1.4  | 333                                | 200   | 10.95                                  | 10.05   | 3,646   | 2,010  |
| Michigan.....     | 117                 | 111  | 1.5                     | 1.5  | 176                                | 166   | 10.60                                  | 9.75    | 1,866   | 1,618  |
| Wisconsin.....    | 172                 | 124  | 1.9                     | 1.7  | 327                                | 211   | 11.50                                  | 9.90    | 3,760   | 2,089  |
| Minnesota.....    | 33                  | 30   | 2.2                     | 2.1  | 73                                 | 63    | 12.90                                  | 10.00   | 942   | 630    |
| Iowa.....         | 142                 | 125  | 2.0                     | 1.6  | 284                                | 200   | 12.25                                  | 9.70    | 3,479   | 1,940  |
| Missouri.....     | 27                  | 17   | 2.2                     | 1.7  | 59                                 | 29    | 10.80                                  | 10.55   | 637   | 306    |
| Nebraska.....     | 5                   | 4    | 2.3                     | 2.2  | 12                                 | 9     | 16.00                                  | 9.00    | 192   | 81     |
| Kansas.....       | 7                   | 3    | 2.2                     | 2.3  | 15                                 | 7     | 9.80                                   | 9.00    | 147   | 63     |
| Kentucky.....     | 25                  | 18   | 2.1                     | 1.9  | 52                                 | 34    | 15.00                                  | 10.00   | 780   | 340    |
| Tennessee.....    | 8                   | 4    | 1.7                     | 1.7  | 14                                 | 7     | 15.00                                  | 11.00   | 210   | 77     |
| Mississippi.....  | 6                   | 8    | 6.0                     | 5.0  | 36                                 | 40    | 25.00                                  | 17.50   | 900   | 700    |
| Idaho.....        | 16                  | 18   | 5.5                     | 4.5  | 88                                 | 81    | 11.25                                  | 9.75    | 990   | 790    |
| Oregon.....       | 5                   | 8    | 3.6                     | 3.7  | 18                                 | 30    | 12.00                                  | 9.00    | 216   | 270    |
| Total.....        | 1,082               | 869  | 1.8                     | 1.6  | 1,944                              | 1,411 | 11.95                                  | 10.27   | 23,227  | 14,488 |
| 1919.....         | 942                 |      | 1.6                     |      | 1,434                              |       | 26.75                                  |         | 39,700  |        |
| 1918.....         | 820                 |      | 1.5                     |      | 1,197                              |       | 19.80                                  |         | 23,705  |        |
| 1917.....         | 821                 |      | 1.8                     |      | 1,453                              |       | 12.54                                  |         | 19,107  |        |
| 1916.....         | 939                 |      | 1.8                     |      | 1,706                              |       | 9.18                                   |         | 15,661  |        |

TABLE 158.—Clover seed: Forecasts of production, monthly, with preliminary and final estimates.

[900 omitted.]

| Year.     | September.      | October.        | November production estimate. | Final estimate. |
|-----------|-----------------|-----------------|-------------------------------|-----------------|
|           | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>               | <i>Bushels.</i> |
| 1917..... | 1,179           | 1,073           | 1,356                         | 1,488           |
| 1918..... | 1,404           | 1,383           | 1,248                         | 1,197           |
| 1919..... | 994             | 1,015           | 1,967                         | 1,484           |
| 1920..... | 1,452           | 1,576           | 1,593                         | 1,944           |
| 1921..... | 1,315           | 1,360           | 1,214                         | 1,411           |

<sup>1</sup> Preliminary.

## CLOVER AND TIMOTHY SEED—Continued.

TABLE 159.—Clover seed: Farm price per bushel, 15th of each month, 1910-1921.

| Year.     | Jan.<br>15. | Feb.<br>15. | Mar.<br>15. | Apr.<br>15. | May<br>15. | June<br>15. | July<br>15. | Aug.<br>15. | Sept.<br>15. | Oct.<br>15. | Nov.<br>15. | Dec.<br>15. | Yearly<br>average. |
|-----------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|--------------------|
| 1910..... | \$3.26      | \$3.26      | \$3.15      | \$7.91      | \$7.47     | \$7.24      | \$7.17      | \$7.53      | \$3.27       | \$3.13      | \$7.70      | \$7.94      | \$7.84             |
| 1911..... | 8.27        | 8.37        | 8.56        | 8.79        | 8.74       | 8.80        | 8.83        | 9.65        | 10.19        | 10.33       | 10.37       | 10.62       | 9.29               |
| 1912..... | 10.89       | 12.22       | 12.89       | 12.91       | 12.53      | 11.69       | 10.64       | 9.80        | 9.39         | 9.37        | 9.06        | 9.00        | 10.87              |
| 1913..... | 9.41        | 10.28       | 10.42       | 11.00       | 10.74      | 9.77        | 9.78        | 9.37        | 7.31         | 7.00        | 7.33        | 7.70        | 9.18               |
| 1914..... | 7.99        | 8.07        | 8.17        | 8.06        | 7.87       | 7.96        | 8.12        | 8.76        | 9.10         | 8.24        | 8.02        | 8.12        | 8.21               |
| 1915..... | 8.51        | 8.60        | 8.55        | 8.36        | 8.14       | 7.90        | 7.98        | 7.94        | 8.49         | 9.70        | 9.67        | 10.01       | 8.65               |
| 1916..... | 10.27       | 10.47       | 10.76       | 10.58       | 9.98       | 9.47        | 9.15        | 9.12        | 8.65         | 8.54        | 9.20        | 9.40        | 9.63               |
| 1917..... | 9.60        | 9.87        | 10.32       | 10.41       | 10.40      | 10.29       | 10.50       | 10.53       | 10.89        | 11.92       | 12.91       | 13.53       | 10.93              |
| 1918..... | 14.48       | 16.46       | 17.49       | 17.86       | 16.56      | 15.88       | 14.71       | 15.20       | 13.61        | 19.01       | 20.03       | 20.67       | 17.08              |
| 1919..... | 21.55       | 21.79       | 22.61       | 24.81       | 24.48      | 23.37       | 23.25       | 24.33       | 25.38        | 26.47       | 26.53       | 27.63       | 24.55              |
| 1920..... | 28.06       | 31.21       | 31.88       | 32.23       | 29.84      | 26.21       | 25.52       | 19.97       | 17.77        | 13.19       | 11.64       | 10.28       | 23.15              |
| 1921..... | 10.82       | 10.61       | 10.98       | 10.80       | 10.71      | 10.20       | 10.00       | 10.37       | 10.25        | 10.21       | 10.09       | 10.38       | 10.45              |

TABLE 160.—Timothy seed: Farm price per bushel, 15th of each month, 1910-1921.

| Year.     | Jan.<br>15. | Feb.<br>15. | Mar.<br>15. | Apr.<br>15. | May<br>15. | June<br>15. | July<br>15. | Aug.<br>15. | Sept.<br>15. | Oct.<br>15. | Nov.<br>15. | Dec.<br>15. | Yearly<br>average. |
|-----------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|--------------------|
| 1910..... | \$4.12      | \$4.51      | \$4.93      | \$5.17      | \$5.24     | \$5.24      | \$5.48      | \$6.52      | \$3.77       | \$4.03      | \$4.08      | \$4.11      | \$5.70             |
| 1911..... | 6.99        | 7.26        | 7.33        | 7.27        | 7.16       | 6.68        | 5.96        | 3.20        | 2.09         | 1.95        | 1.82        | 1.79        | 4.96               |
| 1912..... | 1.79        | 1.75        | 1.72        | 1.74        | 1.76       | 1.77        | 1.94        | 2.01        | 2.13         | 2.02        | 2.08        | 2.10        | 1.90               |
| 1913..... | 2.07        | 2.12        | 2.30        | 2.28        | 2.38       | 2.23        | 2.32        | 2.43        | 2.46         | 2.34        | 2.34        | 2.18        | 2.29               |
| 1914..... | 2.63        | 2.66        | 2.78        | 2.69        | 2.75       | 2.65        | 2.57        | 2.56        | 2.62         | 2.72        | 2.91        | 2.86        | 2.70               |
| 1915..... | 3.05        | 3.19        | 3.28        | 3.51        | 3.33       | 3.26        | 3.08        | 2.36        | 2.22         | 2.27        | 2.25        | 2.31        | 2.84               |
| 1916..... | 2.44        | 2.46        | 2.70        | 2.76        | 3.09       | 3.09        | 3.04        | 3.23        | 3.31         | 3.61        | 3.25        | 3.37        | 3.03               |
| 1917..... | 3.57        | 3.78        | 3.84        | 3.74        | 3.84       | 3.56        | 3.67        | 3.87        | 3.79         | 4.08        | 4.26        | 4.21        | 3.85               |
| 1918..... | 4.34        | 4.51        | 4.54        | 4.69        | 5.05       | 4.63        | 4.49        | 4.58        | 4.55         | 4.78        | 4.67        | 4.98        | 4.65               |
| 1919..... | 5.35        | 5.62        | 5.61        | 5.63        | 5.61       | 5.46        | 5.14        | 4.44        | 3.52         | 3.25        | 3.09        | 3.16        | 4.66               |
| 1920..... | 3.04        | 2.75        | 2.97        | 2.84        | 2.90       | 2.99        | 2.98        | 2.71        | 2.31         | 2.70        | 2.41        | 2.57        | 2.79               |
| 1921..... |             |             |             |             |            |             |             |             |              |             |             |             |                    |

TABLE 161.—Clover seed: Monthly and yearly receipts at Chicago, 1910-11 to 1921-22.<sup>1</sup>

[In thousands of pounds—i. e., 000 omitted.]

| Season.          | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May. | June. | July. | Aug.  | Crop-<br>year<br>total. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------------------------|
| 1910-11.....     | 1,340 | 1,375 | 865   | 231   | 94    | 524   | 751   | 378   | 364  | 405   | 59    | 270   | 6,656                   |
| 1911-12.....     | 519   | 198   | 176   | 65    | 331   | 337   | 357   | 307   | 213  | 194   | 343   | 574   | 3,044                   |
| 1912-13.....     | 271   | 950   | 521   | 295   | 433   | 545   | 901   | 279   | 108  | 165   | 41    | 40    | 4,310                   |
| 1913-14.....     | 188   | 225   | 939   | 1,448 | 1,035 | 418   | 537   | 412   | 210  | 836   | 429   | 1,180 | 8,155                   |
| 1914-15.....     | 789   | 596   | 1,136 | 1,723 | 1,773 | 1,993 | 900   | 438   | 55   |       | 48    | 327   | 9,778                   |
| 1915-16.....     | 2,190 | 1,921 | 1,953 | 1,205 | 980   | 1,236 | 1,123 | 974   | 294  |       | 53    | 138   | 12,067                  |
| 1916-17.....     | 1,356 | 1,308 | 995   | 1,416 | 660   | 1,192 | 833   | 798   | 393  | 307   | 2     | 602   | 9,882                   |
| 1917-18.....     | 1,346 | 945   | 1,149 | 587   | 1,079 | 1,688 | 797   | 217   | 298  | 108   | 22    | 135   | 8,371                   |
| 1918-19.....     | 192   | 1,597 | 1,337 | 1,146 | 1,974 | 1,002 | 1,175 | 464   | 88   |       | 271   | 798   | 10,044                  |
| 1919-20.....     | 1,539 | 1,816 | 1,941 | 1,608 | 2,840 | 2,557 | 2,239 | 884   | 7    | 200   | 195   | 213   | 16,037                  |
| 1920-21.....     | 1,549 | 2,448 | 1,033 | 1,314 | 2,782 | 3,150 | 3,996 | 1,570 | 418  | 319   | 84    | 365   | 19,008                  |
| 1921-22.....     | 739   | 1,235 | 2,040 | 2,064 |       |       |       |       |      |       |       |       |                         |
| 11-year average. | 1,025 | 1,216 | 1,095 | 1,008 | 1,275 | 1,331 | 1,264 | 611   | 223  | 230   | 141   | 422   | 9,839                   |

<sup>1</sup>From Chicago Board of Trade and The Seed World.

## CLOVER AND TIMOTHY SEED—Continued.

TABLE 162.—*Clover seed: Monthly and yearly average spot price.*RED CLOVER SEED, PRIME CONTRACT GRADE, PER 100 POUNDS, CHICAGO,  
1910-11 TO 1921-22.<sup>1</sup>

| Season.           | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Crop-year average. |
|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910-11.....      | \$16.13 | \$15.13 | \$14.45 | \$14.86 | \$15.04 | \$14.80 | \$15.25 | \$15.13 | \$15.31 | \$16.10 | \$15.75 | \$19.25 | \$15.64            |
| 1911-12.....      | 20.10   | 20.63   | 20.63   | 20.75   | 21.81   | 23.13   | 22.50   | 21.63   | 20.55   | 20.13   | 20.00   | 16.00   | 20.66              |
| 1912-13.....      | 17.56   | 18.38   | 18.05   | 18.88   | 19.90   | 19.88   | 19.25   | 21.38   | 18.40   | 16.00   | 15.50   | 14.70   | 18.16              |
| 1913-14.....      | 11.00   | 13.35   | 13.96   | 14.88   | 14.75   | 14.46   | 14.04   | 13.00   | 13.00   | 13.50   | 14.15   | 17.81   | 13.99              |
| 1914-15.....      | 17.19   | 15.05   | 15.00   | 15.59   | 15.84   | 15.29   | 14.30   | 13.50   | 13.50   | 13.50   | 13.50   | 15.19   | 14.82              |
| 1915-16.....      | 18.40   | 21.05   | 20.06   | 20.72   | 19.59   | 21.19   | 18.00   | 16.69   | 16.00   | 14.60   | 14.00   | 15.63   | 17.99              |
| 1916-17.....      | 14.85   | 16.00   | 17.50   | 17.91   | 18.19   | 19.38   | 18.81   | 17.90   | 18.38   | 18.39   | 19.05   | 20.83   | 18.06              |
| 1917-18.....      | 22.36   | 25.16   | 26.51   | 27.45   | 31.40   | 34.35   | 33.72   | 32.15   | 30.51   | 30.51   | .....   | .....   | 29.44              |
| 1918-19.....      | 35.00   | 35.50   | 36.00   | 37.50   | 42.60   | 42.60   | 51.60   | 50.00   | 46.60   | 45.80   | 49.10   | 50.00   | 43.53              |
| 1919-20.....      | 50.00   | 53.10   | 51.20   | 52.00   | 54.23   | 55.73   | 54.22   | 44.96   | 35.00   | 35.00   | 35.00   | 29.55   | 45.86              |
| 1920-21.....      | 26.58   | 22.28   | 21.67   | 20.00   | 21.52   | 18.55   | 18.19   | 17.85   | 19.00   | 19.00   | 19.00   | 19.00   | 20.22              |
| 1921-22.....      | 18.01   | 18.32   | 18.50   | 18.50   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average.. | 22.65   | 23.24   | 23.21   | 23.69   | 24.99   | 25.40   | 25.44   | 24.04   | 22.43   | 22.04   | 21.61   | 21.78   | 23.49              |

ALSIKE CLOVER SEED PER BUSHEL, TOLEDO, 1914-15 TO 1921-22.<sup>2</sup>

| Season.          | Sept.  | Oct.    | Nov.    | Dec.    | Jan.    | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Crop-year average. |
|------------------|--------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------------------|
| 1914-15.....     | .....  | .....   | .....   | .....   | .....   | \$8.96 | \$8.59 | \$8.17 | \$8.05 | \$7.90 | \$8.52 | \$9.13 | .....              |
| 1915-16.....     | \$9.59 | \$10.27 | \$10.35 | \$10.33 | \$10.26 | 10.07  | 9.40   | 9.15   | 9.10   | 9.48   | 9.53   | 9.58   | \$9.78             |
| 1916-17.....     | 9.88   | 10.24   | 10.72   | 11.10   | 11.30   | 11.62  | 11.51  | 11.56  | 11.50  | 11.40  | 11.62  | 11.74  | 11.18              |
| 1917-18.....     | 12.57  | 13.34   | 14.35   | 14.46   | 15.31   | .....  | 15.59  | 15.31  | 15.22  | 12.37  | .....  | .....  | 14.28              |
| 1918-19.....     | .....  | 18.17   | .....   | 19.66   | 18.70   | 16.92  | 20.09  | 25.41  | .....  | .....  | 24.23  | 25.00  | 21.02              |
| 1919-20.....     | 25.30  | 28.72   | 29.97   | 31.47   | 34.57   | 35.17  | 35.71  | 30.89  | 24.37  | 25.52  | 23.95  | 19.24  | 28.74              |
| 1920-21.....     | 16.84  | 17.35   | 17.70   | 16.96   | 16.00   | 15.34  | 14.98  | 13.98  | 13.50  | 12.43  | 10.82  | 10.71  | 14.71              |
| 1921-22.....     | 10.62  | 10.72   | 10.64   | 11.05   | .....   | .....  | .....  | .....  | .....  | .....  | .....  | .....  | .....              |
| 6-year average.. | 14.53  | 16.35   | 16.62   | 17.33   | 17.69   | 17.82  | 17.88  | 17.71  | 14.74  | 14.24  | 16.03  | 15.31  | 16.62              |

<sup>1</sup> From Chicago Board of Trade and The Seed World.<sup>2</sup> Compiled from The Seed World.<sup>3</sup> Price based on very few sales.<sup>4</sup> Five-year average.TABLE 163.—*Timothy seed: Monthly and yearly average spot price per 100 pounds, prime contract grade, Chicago, 1910-11 to 1921-22.<sup>1</sup>*

| Season.           | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Crop year average. |
|-------------------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 1910-11.....      | \$5.36 | \$9.45 | \$9.32 | \$9.64 | \$9.97 | \$10.41 | \$11.40 | \$12.03 | \$12.00 | \$12.00 | \$11.55 | \$13.50 | \$10.64            |
| 1911-12.....      | 14.31  | 15.20  | 15.81  | 16.00  | 16.45  | 16.25   | 16.25   | 15.60   | 14.50   | 13.70   | 11.63   | 10.25   | 14.66              |
| 1912-13.....      | 6.13   | 4.81   | 4.44   | 4.05   | 4.13   | 4.13    | 3.88    | 3.76    | 3.88    | 4.16    | 4.69    | 5.28    | 4.45               |
| 1913-14.....      | 5.59   | 5.58   | 5.51   | 5.41   | 5.55   | 5.53    | 5.45    | 5.19    | 5.30    | 5.47    | 5.63    | 5.87    | 5.51               |
| 1914-15.....      | 6.31   | 6.34   | 5.64   | 5.48   | 6.61   | 7.89    | 7.45    | 7.35    | 8.84    | 6.88    | 7.25    | 7.40    | 6.95               |
| 1915-16.....      | 8.19   | 9.19   | 8.35   | 8.46   | 8.73   | 8.70    | 8.75    | 8.55    | 8.50    | 8.94    | 9.20    | 8.75    | 8.69               |
| 1916-17.....      | 7.00   | 4.99   | 5.43   | 5.50   | 5.74   | 5.55    | 5.55    | 5.78    | 6.81    | 8.20    | 8.14    | 8.01    | 6.39               |
| 1917-18.....      | 8.25   | 8.44   | 8.56   | 7.82   | 7.63   | 8.25    | 8.94    | 8.55    | 8.25    | 8.41    | 7.81    | 8.88    | 8.32               |
| 1918-19.....      | 8.90   | 10.00  | 10.00  | 10.30  | 11.00  | 11.00   | 10.00   | 10.50   | 11.00   | 12.00   | 12.00   | 12.00   | 10.73              |
| 1919-20.....      | 11.75  | 11.50  | 11.25  | 11.50  | 12.25  | 13.62   | 14.30   | 13.07   | 11.76   | 12.00   | 12.00   | 11.85   | 12.24              |
| 1920-21.....      | 8.89   | 7.50   | 6.71   | 6.69   | 6.13   | 5.78    | 5.05    | 4.65    | 5.04    | 5.30    | 5.27    | 5.07    | 6.01               |
| 1921-22.....      | 4.50   | 4.30   | 4.85   | 5.31   | 5.53   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....              |
| 11-year average.. | 8.33   | 8.45   | 8.27   | 8.26   | 8.56   | 8.83    | 8.82    | 8.64    | 8.72    | 8.82    | 8.65    | 8.81    | 8.60               |

<sup>1</sup> From Chicago Board of Trade and The Seed World.

## CLOVER AND TIMOTHY SEED—Continued.

TABLE 164.—*Timothy seed: Monthly and yearly receipts at Chicago, 1910-11 to 1921-22.*<sup>1</sup>

[In thousands of pounds—1. e., 000 omitted.]

| Season.          | Aug.   | Sept.  | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Crop year total. |
|------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|
| 1910-11          | 1,878  | 7,509  | 3,778 | 1,741 | 1,563 | 1,311 | 1,590 | 1,205 | 368   | 106   | 55    | 87    | 21,161           |
| 1911-12          | 4,451  | 5,829  | 4,011 | 2,640 | 1,120 | 709   | 719   | 888   | 557   | 388   | 242   | 158   | 21,044           |
| 1912-13          | 2,916  | 6,875  | 5,505 | 3,606 | 2,132 | 2,361 | 3,019 | 2,831 | 3,964 | 1,509 | 1,764 | 2,647 | 39,181           |
| 1913-14          | 3,601  | 5,947  | 4,232 | 3,421 | 2,131 | 2,191 | 1,763 | 4,393 | 1,977 | 828   | 1,446 | 2,410 | 34,340           |
| 1914-15          | 4,914  | 11,208 | 3,469 | 2,650 | 3,487 | 3,050 | 3,087 | 4,129 | 1,165 | 1,101 | 403   | 752   | 39,415           |
| 1915-16          | 1,201  | 9,894  | 5,573 | 4,039 | 2,416 | 1,431 | 3,203 | 2,167 | 1,019 | 1,030 | 704   | 266   | 31,957           |
| 1916-17          | 2,487  | 10,065 | 5,031 | 3,939 | 3,051 | 2,149 | 2,478 | 6,279 | 3,367 | 2,442 | 1,117 | 924   | 44,479           |
| 1917-18          | 3,810  | 6,525  | 5,172 | 2,900 | 1,915 | 2,009 | 2,242 | 2,554 | 1,434 | 1,250 | 892   | 677   | 30,943           |
| 1918-19          | 764    | 3,198  | 5,175 | 3,242 | 1,463 | 1,578 | 2,234 | 2,965 | 3,772 | 2,306 | 1,248 | 891   | 29,048           |
| 1919-20          | 7,430  | 13,191 | 6,124 | 2,532 | 1,643 | 3,136 | 3,331 | 3,118 | 1,336 | 1,098 | 641   | 1,135 | 44,882           |
| 1920-21          | 3,813  | 12,777 | 9,013 | 5,269 | 3,443 | 2,843 | 3,396 | 4,056 | 2,601 | 2,368 | 1,249 | 531   | 50,351           |
| 1921-22          | 10,849 | 6,269  | 4,536 | 3,197 | 2,669 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....            |
| 11-year average. | 3,344  | 8,502  | 5,244 | 3,287 | 2,220 | 2,036 | 2,886 | 3,144 | 1,960 | 1,320 | 851   | 955   | 35,248           |

<sup>1</sup> From Chicago Board of Trade and The Seed World.

## ALFALFA SEED.

TABLE 165.—*Alfalfa seed: Farm price per bushel, 15th of each month, 1912-1921.*

| Year. | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. | Yearly average. |
|-------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|-----------------|
| 1912  | .....    | .....    | .....    | .....    | .....   | \$3.47   | \$3.32   | \$5.58   | \$9.02    | \$7.87   | \$8.23   | \$7.86   | \$3.34          |
| 1913  | \$7.66   | \$8.15   | \$8.19   | \$8.36   | \$8.21  | 8.08     | 8.26     | 7.66     | 7.42      | 6.96     | 6.86     | 6.60     | 7.68            |
| 1914  | 6.55     | 6.49     | 6.60     | 6.77     | 6.77    | 6.88     | 6.92     | 6.81     | 7.21      | 7.29     | 7.29     | 7.37     | 6.92            |
| 1915  | 7.61     | 7.86     | 7.92     | 8.45     | 7.61    | 8.31     | 8.51     | 8.30     | 7.94      | 8.37     | 8.65     | 8.88     | 8.15            |
| 1916  | 8.84     | 9.20     | 10.02    | 10.39    | 10.70   | 10.10    | 10.30    | 9.38     | 9.27      | 8.61     | 8.30     | 8.69     | 9.47            |
| 1917  | 7.97     | 7.75     | 8.53     | 9.08     | 8.85    | 8.61     | 8.71     | 8.69     | 9.04      | 8.04     | 9.43     | 9.58     | 8.77            |
| 1918  | 10.14    | 9.90     | 10.60    | 10.53    | 10.09   | 10.13    | 9.67     | 9.88     | 10.04     | 9.91     | 9.38     | 9.65     | 9.99            |
| 1919  | 10.07    | 10.49    | 10.64    | 11.18    | 12.13   | 11.79    | 10.89    | 11.34    | 12.34     | 14.90    | 15.23    | 16.68    | 12.30           |
| 1920  | 16.60    | 18.57    | 21.49    | 22.80    | 22.40   | 20.42    | 19.41    | 16.03    | 14.89     | 13.35    | 12.25    | 10.24    | 17.37           |
| 1921  | 9.95     | 9.01     | 9.31     | 8.71     | 8.97    | 8.73     | 7.69     | 8.54     | 8.53      | 8.33     | 8.09     | 7.63     | 8.64            |

TABLE 166.—*Alfalfa seed: Monthly and yearly average spot price per 100 pounds, Kansas City, 1910-11 to 1921-22.*<sup>1</sup>

| Season.          | July.            | Aug.             | Sept.   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.             | May.             | June.            | Crop-year average. |
|------------------|------------------|------------------|---------|---------|---------|---------|---------|---------|---------|------------------|------------------|------------------|--------------------|
| 1910-11          | ( <sup>2</sup> ) | ( <sup>2</sup> ) | \$13.34 | \$12.88 | \$12.88 | \$12.88 | \$12.88 | \$12.88 | \$12.88 | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | \$12.95            |
| 1911-12          | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 11.50   | 10.48   | 10.00   | 10.17   | 11.08   | 10.90   | 10.91   | \$10.45          | \$10.25          | \$10.41          | 10.51              |
| 1912-13          | \$10.50          | \$10.27          | 9.84    | 9.64    | 10.00   | 10.00   | 9.90    | 9.81    | 9.83    | 10.09            | 10.23            | 11.71            | 10.16              |
| 1913-14          | 10.00            | 9.57             | 9.25    | 8.12    | 7.76    | 7.75    | 8.00    | 8.00    | 8.00    | 8.42             | 9.35             | 9.50             | 8.56               |
| 1914-15          | 9.50             | 10.20            | 11.35   | 10.34   | 10.00   | 10.87   | 11.87   | 12.15   | 12.11   | 12.53            | 12.25            | 12.25            | 11.45              |
| 1915-16          | ( <sup>2</sup> ) | 12.17            | 14.86   | 15.09   | 15.57   | 16.08   | 17.40   | 16.29   | 17.25   | 17.25            | 17.25            | 17.25            | 16.28              |
| 1916-17          | 17.51            | 17.53            | 12.63   | 11.23   | 10.56   | 10.66   | 10.62   | 11.00   | 11.00   | 11.18            | 11.80            | 12.00            | 12.33              |
| 1917-18          | 12.00            | 12.32            | 13.25   | 13.51   | 14.06   | 14.00   | 13.50   | 13.50   | 13.50   | 14.38            | 15.00            | 12.42            | 13.47              |
| 1918-19          | 12.90            | 13.61            | 13.02   | 13.12   | 13.45   | 13.31   | 13.56   | 12.75   | 13.75   | 13.04            | 14.27            | 14.21            | 13.53              |
| 1919-20          | 14.50            | 17.70            | 20.00   | 23.50   | 27.72   | 30.00   | 30.00   | 35.77   | 20.73   | 25.06            | 25.09            | 25.00            | 24.41              |
| 1920-21          | 25.00            | 25.00            | 14.79   | 14.67   | 12.50   | 14.00   | 15.00   | 14.62   | 13.25   | 13.76            | 13.25            | 12.75            | 15.72              |
| 1921-22          | 12.75            | 12.75            | 12.12   | 11.50   | 11.50   | 11.00   | .....   | .....   | .....   | .....            | .....            | .....            | .....              |
| 11-year average. | 14.03            | 14.55            | 13.04   | 13.02   | 13.12   | 13.57   | 13.98   | 14.33   | 13.11   | 13.61            | 13.87            | 13.75            | 13.69              |

<sup>1</sup> Compiled from Kansas City Price Current and The Seed World.<sup>2</sup> No quotations.

## COTTON.

TABLE 167.—Cotton: Area and production in undermentioned countries, 1909-1920.

[Bales of 475 pounds net.]

| Country.                             | Area (acres).                     |                      |            |            | Production (bales).               |                  |                  |                    |
|--------------------------------------|-----------------------------------|----------------------|------------|------------|-----------------------------------|------------------|------------------|--------------------|
|                                      | Average<br>1909-1913 <sup>1</sup> | 1918                 | 1919       | 1920       | Average<br>1909-1913 <sup>1</sup> | 1918             | 1919             | 1920               |
| <b>NORTH AMERICA.</b>                |                                   |                      |            |            |                                   |                  |                  |                    |
| United States <sup>2</sup> .....     | 35,895,667                        | 36,008,000           | 33,566,000 | 35,878,000 | 13,033,137                        | 12,040,532       | 11,421,000       | 13,440,000         |
| Porto Rico.....                      |                                   |                      |            | 2,800      | <sup>3</sup> 396                  | 443              |                  | 460                |
| St. Croix.....                       |                                   |                      |            |            | 510                               |                  |                  |                    |
| West Indies:                         |                                   |                      |            |            |                                   |                  |                  |                    |
| British—                             |                                   |                      |            |            |                                   |                  |                  |                    |
| Barbadoes.....                       | <sup>4</sup> 4,227                |                      | 1,179      | 1,200      | <sup>4</sup> 1,211                |                  |                  |                    |
| Grenada <sup>4</sup> .....           |                                   | 3,190                |            | 3,200      | 683                               | <sup>4</sup> 462 | 649              | 774                |
| Jamaica <sup>4</sup> .....           |                                   |                      |            |            | 66                                |                  |                  |                    |
| Leeward Islands.....                 |                                   |                      |            |            | 2,254                             |                  |                  |                    |
| St. Lucia <sup>4</sup> .....         |                                   |                      |            |            | 15                                |                  |                  |                    |
| St. Vincent.....                     |                                   |                      |            | 8,000      | <sup>4</sup> 903                  | <sup>4</sup> 768 | <sup>4</sup> 920 | <sup>4</sup> 1,157 |
| Dominican Republic.....              |                                   |                      |            |            | 1,140                             |                  |                  |                    |
| Mexico.....                          | 245,474                           | <sup>4</sup> 425,939 |            |            | 201,541                           | 203,608          | 199,000          | 188,000            |
| <b>SOUTH AMERICA.</b>                |                                   |                      |            |            |                                   |                  |                  |                    |
| Argentina.....                       | 5,356                             | 33,000               | 33,000     | 59,000     | 2,646                             | 16,000           | 16,000           | 28,000             |
| Brazil.....                          |                                   | 605,000              | 685,000    | 806,000    | 290,400                           | 339,000          | 384,000          | 451,000            |
| Peru.....                            |                                   | 158,218              |            |            | <sup>4</sup> 87,120               | 129,140          | 155,000          | 164,000            |
| <b>EUROPE.</b>                       |                                   |                      |            |            |                                   |                  |                  |                    |
| Bulgaria.....                        | <sup>4</sup> 1,829                | 7,334                | 2,500      | 4,100      | <sup>4</sup> 871                  | 782              | 711              | 1,255              |
| Malta.....                           | 1,095                             | 744                  | 818        | 600        | 433                               | 268              | 332              | 293                |
| <b>ASIA.</b>                         |                                   |                      |            |            |                                   |                  |                  |                    |
| British India.....                   | 22,078,666                        | 20,997,000           | 23,353,000 | 21,341,000 | 3,511,684                         | 3,324,000        | 4,850,000        | 3,013,000          |
| Ceylon.....                          | 558                               |                      |            |            | 834                               |                  |                  |                    |
| Cyprus.....                          |                                   |                      |            | 9,000      | 1,983                             | 835              | 2,456            | 2,024              |
| Dutch East Indies.....               |                                   |                      |            |            | 15,121                            |                  |                  |                    |
| Indo China.....                      |                                   | 43,242               |            |            | <sup>4</sup> 11,689               | 8,000            |                  | 6,000              |
| Japanese Empire:                     |                                   |                      |            |            |                                   |                  |                  |                    |
| Japan.....                           | 6,599                             | 6,563                | 6,000      | 6,000      | 4,704                             | 3,900            | 4,000            | 4,200              |
| Chosen.....                          | 131,104                           | 319,604              | 356,407    | 358,732    | 38,037                            | 68,000           | 87,000           | 101,000            |
| Russia:                              |                                   |                      |            |            |                                   |                  |                  |                    |
| Transcaucasia.....                   | <sup>4</sup> 252,637              | 70,000               |            |            | <sup>4</sup> 79,855               |                  |                  |                    |
| Central Asia.....                    | <sup>4</sup> 1,123,433            |                      |            |            | <sup>4</sup> 658,089              |                  |                  | 115,000            |
| Siam.....                            |                                   |                      |            |            | 5,386                             |                  |                  |                    |
| <b>AFRICA.</b>                       |                                   |                      |            |            |                                   |                  |                  |                    |
| British Africa:                      |                                   |                      |            |            |                                   |                  |                  |                    |
| Nyasaland and Rhodesia.....          | 23,534                            | 23,041               | 13,597     | 22,000     | 4,400                             | 2,196            | 1,800            | 2,900              |
| East Africa.....                     |                                   |                      |            |            | 435                               | 167              | 84               | 84                 |
| Gold Coast.....                      |                                   |                      |            |            | 34                                | 83               |                  |                    |
| Nigeria (Northern).....              |                                   |                      |            |            | 1,004                             | 2,500            | 6,700            | 4,600              |
| Nigeria (Southern, incl. Lagos)..... |                                   |                      |            |            | 8,045                             | 2,600            | 8,000            | 9,000              |
| Uganda.....                          |                                   | 145,000              | 160,000    | 200,000    | 17,613                            | 30,569           | 43,514           | 62,761             |
| Union of South Africa.....           |                                   | 7,600                |            |            | 94                                | 1,686            | 2,968            | 2,000              |
| Egypt.....                           | 1,783,911                         | 1,390,000            | 1,633,540  | 1,896,000  | 1,451,621                         | 999,000          | 1,155,000        | 1,251,000          |
| French Africa:                       |                                   |                      |            |            |                                   |                  |                  |                    |
| Dahomey <sup>4</sup> .....           |                                   |                      |            |            | 629                               | 1,600            |                  |                    |
| Guinea.....                          |                                   |                      |            |            | 230                               | <sup>4</sup> 3   |                  |                    |
| Ivory Coast <sup>4</sup> .....       |                                   |                      |            |            | 84                                | 700              |                  |                    |
| German Africa:                       |                                   |                      |            |            |                                   |                  |                  |                    |
| East Africa.....                     |                                   |                      |            |            | 5,807                             |                  |                  |                    |
| Togo.....                            |                                   |                      |            |            | 2,350                             |                  |                  |                    |
| Italian Africa:                      |                                   |                      |            |            |                                   |                  |                  |                    |
| Eritrea.....                         |                                   |                      |            |            | <sup>4</sup> 942                  |                  |                  |                    |
| Sudan (Anglo Egyptian).....          |                                   |                      |            |            | 13,342                            | 10,000           | 10,300           | 18,400             |
| <b>OCEANIA.</b>                      |                                   |                      |            |            |                                   |                  |                  |                    |
| British Oceania:                     |                                   |                      |            |            |                                   |                  |                  |                    |
| Fiji.....                            | 16                                |                      |            |            | 4                                 |                  |                  |                    |
| Queensland.....                      | 523                               |                      |            |            | 91                                |                  |                  |                    |
| Solomon Islands.....                 |                                   |                      |            |            | 22                                |                  |                  |                    |

<sup>1</sup> Five-year average except in a few cases where five-year statistics were unavailable.<sup>2</sup> Linters not included, quantity produced 1918, 629,516 bales; 1919, 607,969 bales; 1920, 440,313 bales.<sup>3</sup> Shipments to United States plus exports to foreign countries.<sup>4</sup> Unofficial.<sup>4</sup> Exports.<sup>4</sup> Old boundaries.

## COTTON—Continued.

TABLE 168.—Cotton: World production so far as reported, 1900-1920.

[In bales of 478 pounds net weight.]

| Year.     | Production. | Year.     | Production. | Year.     | Production. | Year.     | Production. |
|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
| 1900..... | 15,893,591  | 1906..... | 22,183,148  | 1912..... | 19,578,095  | 1918..... | 17,186,107  |
| 1901..... | 15,926,048  | 1907..... | 18,328,613  | 1913..... | 21,271,902  | 1919..... | 18,849,464  |
| 1902..... | 17,331,503  | 1908..... | 23,688,292  | 1914..... | 23,804,422  | 1920..... | 18,866,908  |
| 1903..... | 17,278,881  | 1909..... | 20,679,334  | 1915..... | 17,659,126  |           |             |
| 1904..... | 21,005,175  | 1910..... | 22,433,269  | 1916..... | 18,008,804  |           |             |
| 1905..... | 18,342,075  | 1911..... | 21,754,810  | 1917..... | 16,323,395  |           |             |

TABLE 169.—Cotton: Acreage, production, value, exports, etc., in the United States, 1866-1921.

| Year.          | Acreage<br>(000<br>omitted). | Average<br>yield<br>per<br>acre. | Production<br>(000<br>omitted). | Average<br>farm<br>price<br>per<br>pound<br>Dec. 1. | Farm<br>value<br>Dec. 1<br>(000<br>omitted). | New York closing prices per<br>pound, on middling upland. |               |                             |               | Domestic<br>exports,<br>fiscal<br>year be-<br>ginning<br>July 1. | Im-<br>ports,<br>fiscal<br>year be-<br>ginning<br>July 1. |
|----------------|------------------------------|----------------------------------|---------------------------------|---|--|---|---------------|-----------------------------|---------------|--|---|
|                |                              |                                  |                                 |   |  | December.   |               | May of fol-<br>lowing year. |               |  |   |
|                |                              |                                  |                                 |   |  | Low.  | High.         | Low.                        | High.         |  |   |
| 1866-1875..... | Acres.<br>8,810              | Pounds.<br>176.2                 | Bales.<br>3,250                 | Cents.<br>9.1                                       | Dollars.<br>243,808                          | Cents.<br>19½   | Cents.<br>20½ | Cents.<br>21½               | Cents.<br>22½ | Bales. <sup>1</sup><br>2,151,216                                 | Bales. <sup>1</sup><br>4,507                              |
| 1876-1885..... | 15,209                       | 170.7                            | 5,682                           | 9.1   | 243,808                                      | 10½   | 11½           | 10½                         | 11½           | 3,707,071  | 8,462   |
| 1886-1895..... | 19,421                       | 176.9                            | 7,637                           | 7.7   | 260,415                                      | 8½  | 9             | 8½                          | 9½            | 5,176,306  | 50,266  |
| 1896.....      | 23,273                       | 184.9                            | 8,533                           | 6.7   | 286,169                                      | 7½  | 7½            | 7½                          | 7½            | 6,207,510  | 103,798   |
| 1897.....      | 24,320                       | 182.7                            | 10,898                          | 6.7   | 296,816                                      | 5½  | 5½            | 6½                          | 6½            | 7,725,572  | 105,321   |
| 1898.....      | 24,967                       | 220.6                            | 11,159                          | 5.7   | 315,449                                      | 5½  | 5½            | 6½                          | 6½            | 7,575,438  | 100,316   |
| 1899.....      | 24,827                       | 183.8                            | 9,315                           | 7.0   | 326,215                                      | 7½  | 7½            | 9                           | 9½            | 6,252,451  | 134,797   |
| 1900.....      | 24,933                       | 194.4                            | 10,123                          | 9.2   | 453,310                                      | 9½  | 10½           | 8½                          | 8½            | 6,718,125  | 93,263  |
| 1901.....      | 26,774                       | 170.0                            | 9,510                           | 7.0   | 334,088                                      | 8   | 8½            | 9½                          | 9½            | 7,057,949  | 197,431   |
| 1902.....      | 27,175                       | 187.3                            | 10,631                          | 7.6   | 403,718                                      | 8½  | 8½            | 10.75                       | 12.15         | 7,138,284  | 149,749   |
| 1903.....      | 27,052                       | 174.3                            | 9,851                           | 10.5  | 516,763                                      | 11.95   | 14.10         | 12.75                       | 13.90         | 6,179,712  | 97,681  |
| 1904.....      | 31,215                       | 205.9                            | 13,438                          | 9.0   | 603,438                                      | 6.85  | 9.00          | 7.85                        | 8.85          | 8,678,644  | 121,917   |
| 1905.....      | 27,110                       | 186.6                            | 10,575                          | 10.8  | 569,791                                      | 11.65   | 12.60         | 11.25                       | 12.00         | 7,268,090  | 141,927   |
| 1906.....      | 31,374                       | 202.5                            | 13,274                          | 9.6   | 635,534                                      | 10.45   | 11.25         | 11.50                       | 12.90         | 9,036,434  | 206,584   |
| 1907.....      | 29,660                       | 179.1                            | 11,107                          | 10.4  | 575,226                                      | 11.70   | 12.20         | 10.20                       | 11.50         | 7,632,997  | 142,146   |
| 1908.....      | 32,444                       | 194.9                            | 13,242                          | 8.7   | 575,092                                      | 9.10  | 9.35          | 10.85                       | 11.80         | 8,896,970  | 173,036   |
| 1909.....      | 30,938                       | 154.3                            | 10,005                          | 13.9  | 697,681                                      | 14.65   | 16.15         | 14.50                       | 16.05         | 6,413,416  | 172,075   |
| 1910.....      | 32,403                       | 170.7                            | 11,609                          | 14.1  | 820,407                                      | 14.80   | 15.25         | 15.35                       | 16.15         | 8,067,382  | 227,587   |
| 1911.....      | 36,045                       | 207.7                            | 15,693                          | 8.8   | 687,888                                      | 9.20  | 9.65          | 11.30                       | 11.90         | 11,070,251   | 219,590   |
| 1912.....      | 34,283                       | 190.9                            | 13,703                          | 11.9  | 817,055                                      | 12.75   | 13.20         | 11.80                       | 12.10         | 9,124,591  | 243,704   |
| 1913.....      | 37,089                       | 182.0                            | 14,156                          | 12.2  | 862,708                                      | 12.50   | 13.50         | 12.90                       | 14.50         | 9,521,881  | 246,694   |
| 1914.....      | 36,832                       | 209.2                            | 16,135                          | 6.8   | 549,036                                      | 7.25  | 7.80          | 9.50                        | 10.40         | 8,807,157  | 370,409   |
| 1915.....      | 31,412                       | 170.3                            | 11,192                          | 11.3  | 631,460                                      | 11.95   | 12.75         | 12.30                       | 13.35         | 6,168,140  | 465,693   |
| 1916.....      | 34,985                       | 156.6                            | 11,450                          | 19.6  | 1,122,295                                    | 16.20   | 20.30         | 19.60                       | 22.10         | 6,176,162  | 294,123   |
| 1917.....      | 33,841                       | 158.7                            | 11,302                          | 27.7  | 1,566,198                                    | 29.85   | 31.85         | 25.70                       | 30.10         | 4,641,023  | 206,651   |
| 1918.....      | 36,008                       | 158.6                            | 12,041                          | 27.6  | 1,663,633                                    | 27.50   | 33.00         | 25.90                       | 34.00         | 5,525,594  | 207,184   |
| 1919.....      | 33,566                       | 161.5                            | 11,421                          | 35.6  | 2,034,658                                    | 38.00   | 40.25         | 40.00                       | 43.00         | 7,087,487  | 690,628   |
| 1920.....      | 35,878                       | 178.4                            | 13,440                          | 13.9  | 933,658                                      | 14.50   | 16.70         | 12.45                       | 13.15         | 5,622,591  | 251,878   |
| 1921.....      | 30,509                       | 124.5                            | 7,954                           | 16.2  | 643,938                                      | 17.50   | 19.45         | 18.95                       | 21.80         |  |   |

<sup>1</sup> Bales of 500 pounds gross weight.

COTTON—Continued.

TABLE 170.—Cotton: Average harvests, by States, 1912-1921.

[Thousands of acres.]

| State.                        | 1912   | 1913   | 1914   | 1915   | 1916   | 1917   | 1918   | 1919   | 1920   | 1921   |
|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Virginia.....                 | 47     | 47     | 45     | 34     | 42     | 50     | 44     | 42     | 42     | 34     |
| North Carolina.....           | 1,545  | 1,576  | 1,527  | 1,282  | 1,451  | 1,515  | 1,600  | 1,490  | 1,537  | 1,403  |
| South Carolina.....           | 2,695  | 2,790  | 2,851  | 2,516  | 2,750  | 2,837  | 3,001  | 2,835  | 2,964  | 2,571  |
| Georgia.....                  | 5,335  | 5,318  | 5,433  | 4,825  | 5,277  | 5,195  | 5,341  | 5,220  | 4,900  | 4,172  |
| Florida.....                  | 224    | 188    | 221    | 193    | 191    | 183    | 167    | 103    | 100    | 65     |
| Alabama.....                  | 3,730  | 3,760  | 4,007  | 3,340  | 3,225  | 1,977  | 2,570  | 2,791  | 2,853  | 2,235  |
| Mississippi.....              | 2,389  | 3,067  | 3,054  | 2,735  | 3,110  | 2,753  | 3,138  | 2,848  | 2,950  | 2,628  |
| Louisiana.....                | 929    | 1,244  | 1,299  | 990    | 1,250  | 1,454  | 1,683  | 1,527  | 1,470  | 1,168  |
| Texas.....                    | 11,338 | 12,597 | 11,931 | 10,510 | 11,400 | 11,092 | 11,233 | 10,476 | 11,898 | 10,745 |
| Arkansas.....                 | 1,991  | 2,502  | 2,480  | 2,170  | 2,600  | 2,740  | 2,991  | 2,725  | 2,980  | 2,382  |
| Tennessee.....                | 753    | 865    | 915    | 772    | 857    | 852    | 902    | 758    | 840    | 634    |
| Missouri.....                 | 103    | 112    | 145    | 96     | 133    | 153    | 145    | 125    | 136    | 103    |
| Oklahoma.....                 | 2,665  | 3,009  | 2,847  | 1,895  | 2,562  | 2,753  | 2,998  | 2,424  | 2,749  | 2,206  |
| California <sup>1</sup> ..... | 9      | 14     | 47     | 39     | 52     | 136    | 173    | 155    | 275    | 140    |
| Arizona.....                  |        |        |        |        |        | 41     | 95     | 107    | 230    | 90     |
| All other.....                |        |        | 20     | 15     | 25     | 15     | 12     | 10     | 24     | 18     |
| United States.....            | 34,283 | 37,089 | 36,832 | 31,412 | 34,985 | 33,841 | 36,008 | 33,566 | 35,878 | 30,509 |

<sup>1</sup> Lower California (85,000 acres in 1921, 125,000 in 1920, 100,000 in 1919, and 88,000 in 1918) included in California figures but excluded from United States totals.

TABLE 171.—Cotton: Production of lint (excluding linters) in 500-pound gross weight bales, by States, 1912 to 1921.

[Thousands of bales, as finally reported by U. S. Bureau of the Census.]

| State.              | 1912   | 1913   | 1914   | 1915   | 1916   | 1917   | 1918   | 1919   | 1920   | 1921  |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Virginia.....       | 24     | 23     | 25     | 16     | 27     | 19     | 25     | 22     | 22     | 17    |
| North Carolina..... | 896    | 792    | 931    | 699    | 655    | 613    | 593    | 530    | 925    | 776   |
| South Carolina..... | 1,182  | 1,378  | 1,534  | 1,134  | 932    | 1,237  | 1,570  | 1,426  | 1,623  | 755   |
| Georgia.....        | 1,777  | 2,817  | 2,718  | 1,909  | 1,821  | 1,884  | 2,122  | 1,690  | 1,415  | 787   |
| Florida.....        | 53     | 59     | 81     | 48     | 41     | 38     | 29     | 16     | 18     | 11    |
| Alabama.....        | 1,342  | 1,495  | 1,751  | 1,021  | 533    | 518    | 801    | 713    | 663    | 580   |
| Mississippi.....    | 1,046  | 1,811  | 1,246  | 954    | 812    | 905    | 1,226  | 961    | 895    | 813   |
| Louisiana.....      | 376    | 444    | 449    | 341    | 443    | 639    | 588    | 298    | 388    | 279   |
| Texas.....          | 4,580  | 3,945  | 4,592  | 3,227  | 3,726  | 3,125  | 2,697  | 3,099  | 4,345  | 2,198 |
| Arkansas.....       | 792    | 1,073  | 1,016  | 816    | 1,134  | 974    | 987    | 884    | 1,215  | 797   |
| Tennessee.....      | 277    | 379    | 284    | 303    | 232    | 240    | 330    | 310    | 325    | 302   |
| Missouri.....       | 56     | 67     | 62     | 48     | 63     | 61     | 62     | 64     | 79     | 70    |
| Oklahoma.....       | 1,021  | 840    | 1,262  | 640    | 823    | 959    | 577    | 1,016  | 1,336  | 481   |
| California.....     | 8      | 23     | 50     | 29     | 44     | 53     | 67     | 56     | 75     | 34    |
| Arizona.....        |        |        |        |        |        | 22     | 56     | 60     | 103    | 45    |
| All other.....      | 3      | 10     | 14     | 7      | 14     | 5      | 6      | 5      | 13     | 9     |
| United States.....  | 13,703 | 14,156 | 16,135 | 11,192 | 11,450 | 11,302 | 12,041 | 11,421 | 13,440 | 7,954 |

TABLE 172.—Cotton: Condition of crop, United States, monthly, 1900-1921.

[Prior to 1901 figures of condition relate to first month following dates indicated.]

| Year.     | May 25. | June 25. | July 25. | Aug. 25. | Sept. 25. | Year.     | May 25. | June 25. | July 25. | Aug. 25. | Sept. 25. |
|-----------|---------|----------|----------|----------|-----------|-----------|---------|----------|----------|----------|-----------|
| 1900..... | P. c.   | P. c.    | P. c.    | P. c.    | P. c.     | 1911..... | P. c.   | P. c.    | P. c.    | P. c.    | P. c.     |
| 1901..... | 82.5    | 75.8     | 76.0     | 68.2     | 67.0      | 1912..... | 87.8    | 88.2     | 89.1     | 73.2     | 71.1      |
| 1902..... | 81.5    | 81.1     | 77.2     | 71.4     | 61.4      | 1913..... | 78.9    | 80.4     | 76.5     | 74.8     | 69.6      |
| 1903..... | 95.1    | 84.7     | 81.9     | 64.0     | 58.3      | 1914..... | 79.1    | 81.8     | 79.6     | 68.2     | 64.1      |
| 1904..... | 74.1    | 77.1     | 79.7     | 81.2     | 65.1      | 1915..... | 74.3    | 79.6     | 76.4     | 73.0     | 73.5      |
| 1905..... | 88.0    | 88.0     | 91.6     | 84.1     | 75.8      | 1916..... | 80.0    | 80.2     | 75.4     | 69.2     | 60.8      |
| 1906..... | 77.2    | 77.0     | 74.9     | 72.1     | 71.2      | 1917..... | 77.5    | 81.1     | 72.3     | 61.2     | 56.3      |
| 1907..... | 84.6    | 83.3     | 82.9     | 77.3     | 71.6      | 1918..... | 69.5    | 70.3     | 70.3     | 67.8     | 60.4      |
| 1908..... | 70.5    | 72.0     | 75.0     | 72.7     | 67.7      | 1919..... | 82.3    | 85.8     | 73.5     | 55.7     | 54.4      |
| 1909..... | 79.7    | 81.2     | 83.0     | 76.1     | 69.7      | 1920..... | 75.6    | 70.0     | 67.1     | 61.4     | 54.4      |
| 1910..... | 81.1    | 74.6     | 71.9     | 63.7     | 55.5      | 1921..... | 62.4    | 70.7     | 74.1     | 67.5     | 59.1      |
|           | 82.0    | 80.7     | 75.5     | 72.1     | 65.9      |           | 66.0    | 69.2     | 64.7     | 49.3     | 42.2      |



## COTTON—Continued.

TABLE 173.—Cotton: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.     | July.         | August.       | September.    | October.      | December production estimate. | Final estimate (census). |
|-----------|---------------|---------------|---------------|---------------|-------------------------------|--------------------------|
|           | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i>                 | <i>Bales.</i>            |
| 1915..... | 12,381        | 11,876        | 11,697        | 10,950        | 11,161                        | 11,192                   |
| 1916..... | 14,266        | 12,916        | 11,800        | 11,637        | 11,511                        | 11,450                   |
| 1917..... | 11,633        | 11,949        | 12,499        | 12,047        | 10,949                        | 11,302                   |
| 1918..... | 15,327        | 13,619        | 11,137        | 11,818        | 11,700                        | 12,041                   |
| 1919..... | 10,966        | 11,016        | 11,230        | 10,696        | 11,030                        | 11,421                   |
| 1920..... | 11,450        | 12,519        | 12,783        | 12,123        | 12,987                        | 13,440                   |
| 1921..... | 8,433         | 8,203         | 7,027         | 6,537         | 8,340                         | 7,964                    |

TABLE 174.—Cotton: Yield per acre, price per pound December 1, and value per acre, by States.

| State.     | Yield per acre (pounds of lint). |       |       |       |       | Farm price per pound (cents). |                            |       |       |       |       |       |       |      |      | Value per acre (dollars). <sup>1</sup> |        |                           |
|------------|----------------------------------|-------|-------|-------|-------|-------------------------------|----------------------------|-------|-------|-------|-------|-------|-------|------|------|--|--------|---------------------------|
|            |                                  |       |       |       |       |                               |                            |       |       |       |       |       |       |      |      |  |        |                           |
|            | 5-year average 1917-1921.        | 1917  | 1918  | 1919  | 1920  | 1921                          | 10-year average 1912-1921. | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918 | 1919 | 1920                                   | 1921   | 5-year average 1916-1920. |
| Va.....    | 233                              | 180   | 270   | 255   | 230   | 230                           | 18.4                       | 12.0  | 13.1  | 7.3   | 11.4  | 19.4  | 27.8  | 35.0 | 15.0 | 16.4                                   | 61.10  | 37.72                     |
| N. C.....  | 253                              | 194   | 268   | 266   | 275   | 264                           | 18.2                       | 12.2  | 12.6  | 6.9   | 11.2  | 19.4  | 27.7  | 35.2 | 14.5 | 16.4                                   | 59.94  | 43.30                     |
| S. C.....  | 230                              | 203   | 230   | 240   | 260   | 140                           | 18.5                       | 12.4  | 12.7  | 6.9   | 11.3  | 19.4  | 28.4  | 35.7 | 14.5 | 16.0                                   | 56.56  | 42.40                     |
| Ge.....    | 149                              | 173   | 190   | 152   | 138   | 99                            | 18.7                       | 12.4  | 12.8  | 6.9   | 11.4  | 19.4  | 28.3  | 35.7 | 14.5 | 16.6                                   | 42.09  | 14.94                     |
| Fla.....   | 85                               | 100   | 86    | 74    | 86    | 30                            | 26.1                       | 15.7  | 17.0  | 12.2  | 14.8  | 31.0  | 50.5  | 54.0 | 42.0 | 17.0                                   | 33.06  | 14.49                     |
| Ala.....   | 126                              | 125   | 149   | 122   | 111   | 124                           | 18.3                       | 12.1  | 12.7  | 6.7   | 11.1  | 19.5  | 28.0  | 37.0 | 15.0 | 16.0                                   | 29.95  | 19.84                     |
| Miss.....  | 159                              | 155   | 187   | 160   | 145   | 143                           | 18.9                       | 12.3  | 12.6  | 6.8   | 11.5  | 20.0  | 28.7  | 37.7 | 15.0 | 16.6                                   | 40.79  | 24.57                     |
| La.....    | 142                              | 210   | 197   | 93    | 126   | 114                           | 17.9                       | 11.5  | 11.7  | 6.9   | 11.1  | 21.9  | 124.7 | 53.5 | 14.2 | 15.0                                   | 56.98  | 17.10                     |
| Tex.....   | 132                              | 185   | 115   | 180   | 174   | 98                            | 18.0                       | 11.1  | 11.5  | 6.8   | 11.1  | 19.4  | 28.7  | 35.0 | 14.3 | 16.1                                   | 34.18  | 15.78                     |
| Ark.....   | 168                              | 170   | 158   | 155   | 195   | 100                           | 18.4                       | 12.3  | 11.6  | 6.9   | 11.6  | 19.4  | 28.7  | 35.0 | 14.3 | 16.1                                   | 43.04  | 25.76                     |
| Feun.....  | 183                              | 130   | 175   | 195   | 185   | 228                           | 17.9                       | 12.4  | 12.7  | 6.4   | 11.3  | 19.5  | 27.7  | 35.0 | 14.3 | 16.6                                   | 42.35  | 36.48                     |
| Mo.....    | 249                              | 190   | 200   | 257   | 275   | 325                           | 17.6                       | 11.8  | 11.5  | 6.5   | 11.0  | 19.4  | 27.7  | 35.0 | 14.3 | 16.6                                   | 54.70  | 48.75                     |
| Okla.....  | 157                              | 165   | 92    | 195   | 200   | 104                           | 17.3                       | 11.1  | 11.4  | 6.5   | 11.3  | 19.4  | 28.6  | 35.0 | 14.3 | 16.6                                   | 27.85  | 14.02                     |
| Calif..... | 251                              | 242   | 279   | 288   | 266   | 258                           | 21.2                       | 12.5  | 13.0  | 7.0   | 11.2  | 20.0  | 28.0  | 35.0 | 14.3 | 16.0                                   | 84.79  | 43.85                     |
| Ariz.....  | 260                              | 285   | 280   | 270   | 224   | 242                           | 20.0                       | ..... | ..... | ..... | ..... | ..... | 48.0  | 51.0 | 30.0 | 27.0                                   | 104.56 | 65.34                     |
| U. S.....  | 156.7                            | 159.7 | 159.6 | 161.5 | 178.4 | 124.5                         | 18.3                       | 11.9  | 12.2  | 6.8   | 11.3  | 19.6  | 27.7  | 35.6 | 13.9 | 16.2                                   | 42.24  | 21.11                     |

<sup>1</sup> Based upon farm price Dec. 1.

TABLE 175.—Cotton: Farm price, cents per pound on 1st of each month, 1908-1921.

| Year.                  | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. | Yearly aver. |
|------------------------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|--------------|
| 1908.....              | 10.7    | 10.8    | 11.0    | 10.2    | 9.6    | 10.6    | 10.9    | 10.3    | 9.4      | 9.0     | 8.7     | 8.7     | 9.6          |
| 1909.....              | 8.4     | 9.0     | 9.0     | 9.1     | 9.6    | 10.1    | 10.3    | 11.3    | 11.7     | 12.6    | 13.7    | 13.9    | 11.6         |
| 1910.....              | 14.6    | 14.0    | 14.0    | 14.1    | 14.0   | 14.2    | 13.9    | 14.3    | 14.4     | 13.3    | 14.0    | 14.1    | 14.0         |
| 1911.....              | 14.4    | 14.3    | 13.9    | 13.9    | 14.2   | 14.6    | 14.4    | 13.2    | 11.8     | 10.2    | 8.9     | 8.8     | 11.4         |
| 1912.....              | 8.4     | 9.0     | 9.8     | 10.1    | 10.9   | 11.0    | 11.2    | 12.0    | 11.3     | 11.2    | 10.9    | 11.9    | 10.5         |
| 1913.....              | 12.2    | 11.9    | 11.8    | 11.8    | 11.6   | 11.5    | 11.6    | 11.5    | 11.8     | 13.3    | 13.0    | 12.2    | 12.4         |
| 1914.....              | 11.7    | 11.9    | 12.6    | 11.9    | 12.2   | 12.4    | 12.4    | 12.4    | 8.7      | 7.8     | 6.3     | 6.8     | 9.1          |
| 1915.....              | 8.6     | 7.4     | 7.4     | 8.1     | 9.1    | 8.6     | 8.6     | 8.1     | 8.5      | 11.2    | 11.6    | 11.3    | 9.7          |
| 1916.....              | 11.4    | 11.5    | 11.1    | 11.5    | 11.5   | 12.2    | 12.5    | 12.6    | 14.6     | 15.5    | 18.0    | 19.6    | 15.1         |
| 1917.....              | 17.1    | 16.8    | 15.9    | 18.0    | 18.9   | 20.2    | 24.7    | 24.3    | 23.4     | 23.3    | 27.3    | 27.7    | 22.7         |
| 1918.....              | 28.9    | 29.7    | 30.3    | 31.8    | 28.5   | 27.4    | 28.6    | 27.8    | 32.2     | 31.8    | 29.3    | 27.5    | 29.4         |
| 1919.....              | 23.7    | 24.9    | 24.9    | 24.5    | 26.0   | 22.5    | 31.1    | 32.5    | 30.3     | 31.3    | 26.5    | 25.6    | 31.3         |
| 1920.....              | 35.9    | 36.2    | 36.2    | 37.3    | 37.7   | 37.2    | 37.4    | 36.8    | 31.1     | 25.5    | 19.4    | 13.9    | 26.8         |
| 1921.....              | 11.5    | 11.8    | 10.3    | 9.4     | 9.4    | 9.8     | 9.6     | 9.8     | 12.6     | 19.8    | 17.7    | 16.2    | 14.7         |
| Average 1912-1921..... | 17.2    | 17.1    | 16.9    | 17.4    | 17.8   | 18.0    | 18.8    | 18.8    | 18.4     | 19.1    | 19.0    | 18.3    | 18.2         |

## COTTON—Continued.

TABLE 176.—Cotton: Extent and causes of yearly crop losses, 1909-1920.

| Year.        | Deficient moisture. | Excessive moisture. | Floods.          | Frost or freeze. | Hail.  | Hot winds. | Storms. | Total climatic. | Plant disease. | Insect pests. | Animal pests.    | Destructive seed. | Total. |
|--------------|---------------------|---------------------|------------------|------------------|--------|------------|---------|-----------------|----------------|---------------|------------------|-------------------|--------|
|              | P. ct.              | P. ct.              | P. ct.           | P. ct.           | P. ct. | P. ct.     | P. ct.  | P. ct.          | P. ct.         | P. ct.        | P. ct.           | P. ct.            | P. ct. |
| 1920.....    | 2.2                 | 8.8                 | 0.8              | 0.8              | 0.2    | 0.1        | 0.2     | 13.1            | 1.2            | 23.0          | 0.2              | 0.2               | 39.0   |
| 1919.....    | 2.7                 | 15.3                | 1.6              | .3               | .2     | .4         | .5      | 21.2            | 1.4            | 13.8          | ( <sup>1</sup> ) | .2                | 41.9   |
| 1918.....    | 23.8                | .9                  | .3               | .6               | .1     | 2.8        | .3      | 29.2            | 2.0            | 7.9           | ( <sup>1</sup> ) | .1                | 40.3   |
| 1917.....    | 15.1                | 1.7                 | .5               | 6.0              | 1.0    | .7         | .2      | 25.5            | 1.3            | 12.3          | ( <sup>1</sup> ) | .1                | 39.9   |
| 1916.....    | 9.2                 | 9.1                 | 3.1              | .4               | .7     | .6         | 2.0     | 25.2            | .9             | 15.7          | ( <sup>1</sup> ) | .1                | 42.4   |
| 1915.....    | 6.8                 | 2.7                 | 1.9              | .6               | .7     | 1.1        | 2.6     | 19.3            | 1.9            | 12.2          | ( <sup>1</sup> ) | .1                | 38.8   |
| 1914.....    | 7.9                 | 2.9                 | .5               | .9               | .4     | .6         | .3      | 13.8            | .2             | 9.8           | ( <sup>1</sup> ) | .2                | 25.4   |
| 1913.....    | 15.2                | 2.0                 | .8               | 1.1              | .4     | 2.4        | .3      | 23.1            | .5             | 8.9           | ( <sup>1</sup> ) | .4                | 33.7   |
| 1912.....    | 8.1                 | 7.6                 | 1.2              | 1.0              | .6     | 1.2        |         |                 | 4.3            | 6.5           | 0.1              |                   | 32.7   |
| 1911.....    | 9.8                 | 2.6                 | ( <sup>1</sup> ) | .3               | .1     | 1.6        | .3      |                 |                |               |                  |                   | 26.1   |
| 1910.....    | 12.2                | 5.1                 | .9               | 2.1              | .3     | 1.6        |         |                 |                |               |                  | .3                | 35.6   |
| 1909.....    | 14.9                | 6.0                 | 1.1              | 1.0              | .6     | 3.0        |         |                 |                |               |                  | .1                | 42.0   |
| Average..... | 10.7                | 5.6                 | 1.1              |                  |        |            | .6      | 21.5            | 1.6            | 11.6          | ( <sup>1</sup> ) | .2                | 36.3   |

<sup>1</sup> Less than 0.05 per cent.

TABLE 177.—Cotton: Percentage of loss due to boll weevil (averages of estimates of crop reporters).

[100=normal crop.]

| State.                      | 1920  | 1919  | 1918  | 1917  | 1916  | 1915  | 1914  | 1913  | 1912  | 1911  | 1910  | 1909  |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| South Carolina.....         | 13.26 | 3.00  | 0.07  | 0.01  | 0.02  | 0.02  | ..... | 0.10  | ..... | ..... | ..... | ..... |
| Georgia.....                | 30.56 | 19.36 | 10.73 | 9.06  | 3.44  | .28   | ..... | ..... | ..... | ..... | ..... | ..... |
| Florida.....                | 32.10 | 40.46 | 23.85 | 27.07 | 20.98 | 13.14 | ..... | 11.80 | 0.30  | ..... | ..... | ..... |
| Tennessee.....              | .57   | .17   | .37   | 1.74  | 1.23  | .04   | 0.08  | .10   | ..... | ..... | ..... | ..... |
| Alabama.....                | 36.03 | 28.77 | 12.14 | 28.83 | 27.91 | 18.16 | 6.02  | 4.80  | 1.50  | 0.30  | 0.05  | 0.10  |
| Mississippi.....            | 32.25 | 19.50 | 10.41 | 22.22 | 31.73 | 24.03 | 24.14 | 33.90 | 18.00 | 5.10  | 14.66 | 4.20  |
| Louisiana.....              | 25.99 | 24.84 | 9.79  | 11.59 | 24.31 | 19.85 | 17.66 | 25.10 | 13.70 | 11.40 | 40.30 | 41.70 |
| Texas.....                  | 19.90 | 13.96 | 4.43  | 7.26  | 18.53 | 16.28 | 7.86  | 6.80  | 2.80  | .90   | 6.52  | 12.10 |
| Oklahoma.....               | 8.61  | 1.48  | 1.30  | 4.25  | 3.70  | 2.70  | .79   | .40   | .50   | .20   | 1.27  | 3.00  |
| Arkansas.....               | 9.41  | 4.79  | 3.14  | 8.96  | 7.49  | 4.69  | 2.93  | 2.80  | 2.40  | 2.00  | 7.53  | 6.10  |
| U. S. weighted average..... | 19.95 | 13.20 | 5.83  | 9.34  | 13.35 | 9.93  | 5.91  | 6.69  | 3.26  | 1.28  | 5.30  | 6.13  |

TABLE 178.—Cotton: Average closing prices, New York, cents per pound, for future delivery, 1920-21.<sup>1</sup>

| During—              | Delivery in— |       |       |                   |       |       |                   |       |                   |       |                    |       |
|----------------------|--------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------------------|-------|--------------------|-------|
|                      | Aug.         | Sept. | Oct.  | Nov. <sup>2</sup> | Dec.  | Jan.  | Feb. <sup>2</sup> | Mar.  | Apr. <sup>2</sup> | May.  | June. <sup>2</sup> | July. |
| 1920                 |              |       |       |                   |       |       |                   |       |                   |       |                    |       |
| August.....          | 32.10        | 30.55 | 29.61 | 29.13             | 28.38 | 27.53 | 27.43             | 27.24 | 27.04             | 26.91 | 26.82              | 26.68 |
| September.....       | .....        | 28.44 | 27.09 | 25.67             | 24.84 | 23.86 | 23.66             | 23.29 | 23.16             | 22.86 | 22.75              | 22.65 |
| October.....         | 19.38        | 19.04 | 21.36 | 20.84             | 20.71 | 20.28 | 20.20             | 20.10 | 20.03             | 19.90 | 19.78              | 19.68 |
| November.....        | 16.99        | 16.90 | 16.79 | 18.45             | 17.88 | 17.53 | 17.46             | 17.41 | 17.37             | 17.31 | 17.20              | 17.09 |
| December.....        | 15.31        | 15.39 | 15.33 | 14.44             | 15.39 | 15.22 | 15.15             | 15.12 | 15.16             | 15.25 | 15.25              | 15.32 |
| 1921                 |              |       |       |                   |       |       |                   |       |                   |       |                    |       |
| January.....         | 15.44        | 15.52 | 15.52 | 15.52             | 15.59 | 16.71 | 15.20             | 15.17 | 15.20             | 15.25 | 15.32              | 15.43 |
| February.....        | 14.08        | 14.23 | 14.35 | 14.44             | 14.54 | 14.60 | 13.32             | 13.11 | 13.33             | 13.56 | 13.74              | 13.95 |
| March.....           | 12.52        | 12.62 | 12.83 | 12.93             | 13.06 | 13.13 | 12.74             | 11.25 | 11.62             | 11.89 | 12.08              | 12.34 |
| April.....           | 12.69        | 12.88 | 13.06 | 13.25             | 13.44 | 13.61 | 13.71             | 13.88 | 11.67             | 11.55 | 12.21              | 12.49 |
| May.....             | 13.15        | 13.38 | 12.57 | 13.75             | 13.93 | 14.03 | 14.18             | 14.33 | .....             | 12.55 | 12.66              | 12.62 |
| June.....            | 12.13        | 12.39 | 12.64 | 12.88             | 13.16 | 13.22 | 13.37             | 13.52 | 12.64             | 13.79 | 11.83              | 11.88 |
| July.....            | 12.12        | 12.40 | 12.62 | 12.82             | 13.05 | 13.06 | 13.18             | 12.38 | 13.39             | 13.46 | 13.51              | 12.16 |
| Crop-year average... | 15.99        | 16.98 | 17.06 | 17.01             | 17.00 | 17.66 | 16.72             | 16.48 | 16.51             | 16.19 | 16.10              | 16.04 |
| August.....          | 12.82        | 13.57 | 13.77 | 13.98             | 14.17 | 14.18 | 14.27             | 14.38 | 14.42             | 14.47 | 14.50              | 14.60 |
| September.....       | 18.85        | 19.04 | 19.54 | 19.61             | 19.79 | 19.85 | 19.58             | 19.58 | 19.47             | 19.41 | 19.25              | 19.19 |
| October.....         | 17.64        | 17.29 | 19.21 | 19.13             | 19.19 | 18.94 | 18.66             | 18.77 | 18.56             | 18.36 | 18.14              | 17.90 |
| November.....        | 16.53        | 16.23 | 15.94 | 17.39             | 17.61 | 17.45 | 17.44             | 17.41 | 17.28             | 17.19 | 16.99              | 16.76 |
| December.....        | 16.82        | 16.59 | 16.35 | .....             | 17.77 | 17.36 | 17.83             | 17.81 | 17.63             | 17.49 | 17.27              | 17.09 |

<sup>1</sup> Compiled from New York Cotton Exchange Reports.<sup>2</sup> Nominal prices.

## COTTON—Continued.

TABLE 179.—Cotton, middling: Monthly and yearly average spot price, cents per pound.

[Compiled from daily reports, Bureau of Markets and Crop Estimates.]

## NORFOLK.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 7.89  | 8.33  | 9.38  | 9.12  | 8.97  | 8.43  | .....           |
| 1915-16.....     | 8.77  | 10.30 | 11.87 | 11.39 | 11.76 | 11.92 | 11.53 | 11.63 | 11.76 | 12.61 | 12.53 | 13.04 | 11.62           |
| 1916-17.....     | 14.32 | 15.39 | 17.40 | 19.37 | 17.87 | 17.50 | 16.54 | 18.41 | 19.73 | 20.09 | 24.33 | 25.21 | 18.85           |
| 1917-18.....     | 25.33 | 21.92 | 26.99 | 28.35 | 29.18 | 30.47 | 30.36 | 32.42 | 32.99 | 29.26 | 28.95 | 29.59 | 28.82           |
| 1918-19.....     | 31.51 | 33.28 | 33.70 | 27.59 | 27.83 | 26.23 | 24.38 | 25.27 | 25.87 | 28.32 | 31.18 | 33.18 | 28.74           |
| 1919-20.....     | 30.79 | 29.58 | 33.70 | 37.47 | 37.99 | 38.84 | 38.60 | 39.20 | 40.11 | 40.50 | 40.50 | 40.50 | 37.82           |
| 1920-21.....     | 37.00 | 29.06 | 21.23 | 17.39 | 14.46 | 14.85 | 12.89 | 11.37 | 11.20 | 11.60 | 10.76 | 11.31 | 16.93           |
| 1921-22.....     | 12.57 | 19.10 | 18.66 | 17.12 | 17.28 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 24.62 | 23.26 | 23.57 | 23.59 | 23.18 | 23.30 | 22.38 | 23.05 | 23.61 | 23.73 | 24.76 | 25.47 | 23.71           |

## AUGUSTA.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 7.90  | 8.27  | 9.40  | 9.17  | 8.92  | 8.56  | .....           |
| 1915-16.....     | 8.55  | 10.22 | 11.88 | 11.47 | 11.73 | 11.95 | 11.49 | 11.66 | 11.74 | 12.54 | 12.65 | 12.79 | 11.56           |
| 1916-17.....     | 14.18 | 15.31 | 17.70 | 19.61 | 18.64 | 17.76 | 16.46 | 18.74 | 20.08 | 20.41 | 24.60 | 25.32 | 19.07           |
| 1917-18.....     | 24.59 | 21.63 | 26.93 | 28.49 | 29.37 | 31.16 | 31.15 | 33.44 | 33.08 | 28.61 | 30.45 | 29.24 | 28.01           |
| 1918-19.....     | 31.14 | 32.88 | 30.46 | 27.98 | 28.24 | 27.33 | 25.43 | 26.17 | 28.78 | 28.96 | 31.55 | 33.59 | 29.21           |
| 1919-20.....     | 30.72 | 29.41 | 34.72 | 38.34 | 38.46 | 39.67 | 38.48 | 40.04 | 41.06 | 41.44 | 42.13 | 40.65 | 37.93           |
| 1920-21.....     | 35.03 | 23.17 | 21.60 | 17.75 | 14.62 | 14.46 | 12.67 | 10.82 | 11.00 | 11.36 | 10.62 | 11.29 | 16.62           |
| 1921-22.....     | 12.83 | 19.49 | 18.74 | 16.93 | 17.17 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 24.04 | 22.94 | 23.88 | 23.93 | 23.51 | 23.72 | 22.61 | 23.48 | 23.96 | 23.89 | 25.33 | 25.50 | 23.90           |

## SAVANNAH.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 8.14  | 8.36  | 9.29  | 9.36  | 9.03  | 8.66  | .....           |
| 1915-16.....     | 8.62  | 10.24 | 11.95 | 11.60 | 12.11 | 12.20 | 11.79 | 11.90 | 11.90 | 12.61 | 12.75 | 13.00 | 11.72           |
| 1916-17.....     | 14.21 | 15.40 | 17.54 | 19.69 | 19.27 | 18.45 | ..... | 18.82 | 20.15 | 20.62 | 24.83 | 25.95 | 19.54           |
| 1917-18.....     | 25.20 | 21.87 | 27.05 | 28.26 | 29.28 | 31.12 | 30.94 | 32.53 | 33.42 | 31.50 | 30.24 | 30.10 | 29.29           |
| 1918-19.....     | 31.22 | 32.91 | 30.53 | 29.43 | 29.52 | 31.00 | 27.22 | 27.04 | 26.96 | 29.11 | 31.92 | 33.61 | 30.04           |
| 1919-20.....     | 31.64 | 29.66 | 34.56 | 38.45 | 38.91 | 39.89 | 39.45 | 40.31 | 41.60 | 41.53 | 41.74 | 40.87 | 38.22           |
| 1920-21.....     | 34.69 | 28.74 | 22.12 | 18.38 | 15.68 | 15.62 | 11.48 | 11.75 | 11.48 | 11.58 | 10.91 | 11.31 | 17.20           |
| 1921-22.....     | 12.74 | 19.64 | 19.30 | 17.17 | 17.39 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 24.26 | 23.14 | 23.96 | 24.30 | 24.13 | 24.71 | 24.67 | 23.72 | 24.25 | 24.58 | 25.40 | 25.81 | 24.34           |

## MONTGOMERY.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 7.70  | 8.04  | 9.04  | 8.82  | 8.70  | 8.35  | .....           |
| 1915-16.....     | 8.42  | 10.02 | 11.74 | 11.27 | 11.65 | 11.75 | 11.32 | 11.37 | 11.52 | 12.28 | 12.46 | 12.69 | 11.37           |
| 1916-17.....     | 13.92 | 15.21 | 17.43 | 19.34 | 18.33 | 17.78 | 16.81 | 18.64 | 19.88 | 20.14 | 24.06 | 24.82 | 18.86           |
| 1917-18.....     | 24.67 | 21.47 | 26.98 | 28.43 | 29.49 | 31.28 | 31.30 | 33.63 | 33.88 | 29.48 | 29.80 | 29.63 | 29.15           |
| 1918-19.....     | 29.60 | 32.39 | 30.24 | 28.56 | 28.19 | 28.48 | 27.00 | 26.98 | 26.81 | 28.54 | 31.10 | 33.36 | 29.19           |
| 1919-20.....     | 30.68 | 29.20 | 34.26 | 38.16 | 38.26 | 39.29 | 38.39 | 41.41 | 40.90 | 40.67 | 40.83 | 40.15 | 37.52           |
| 1920-21.....     | 38.38 | 27.84 | 21.24 | 17.97 | 14.40 | 13.86 | 12.32 | 10.39 | 10.53 | 10.59 | 10.09 | 10.53 | 16.37           |
| 1921-22.....     | 11.89 | 18.73 | 18.46 | 16.88 | 16.92 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 23.94 | 22.99 | 23.65 | 23.96 | 23.89 | 23.74 | 22.86 | 23.19 | 23.92 | 23.67 | 24.73 | 25.20 | 23.74           |

## MEMPHIS.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 7.87  | 8.26  | 9.24  | 9.17  | 8.99  | 8.69  | .....           |
| 1915-16.....     | 8.91  | 10.32 | 12.15 | 11.55 | 12.12 | 12.29 | 11.79 | 11.82 | 12.00 | 12.81 | 13.07 | 13.15 | 11.83           |
| 1916-17.....     | 14.35 | 15.53 | 17.40 | 19.60 | 18.96 | 17.88 | 17.00 | 18.17 | 19.97 | 20.34 | 24.02 | 25.75 | 19.08           |
| 1917-18.....     | 25.96 | 22.97 | 27.64 | 28.91 | 29.57 | 31.07 | 31.38 | 32.82 | 33.57 | 30.08 | 30.06 | 30.00 | 29.49           |
| 1918-19.....     | 30.98 | 33.89 | 31.66 | 30.17 | 29.49 | 29.29 | 27.18 | 26.86 | 26.90 | 29.08 | 32.16 | 33.80 | 30.11           |
| 1919-20.....     | 33.48 | 30.96 | 35.95 | 41.17 | 39.88 | 40.35 | 39.22 | 40.04 | 41.69 | 41.31 | 40.73 | 39.60 | 38.70           |
| 1920-21.....     | 36.35 | 31.00 | 21.98 | 18.28 | 14.75 | 14.48 | 13.48 | 11.65 | 11.25 | 12.63 | 11.06 | 11.82 | 17.28           |
| 1921-22.....     | 12.17 | 19.46 | 19.71 | 18.27 | 18.15 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 25.00 | 24.12 | 24.38 | 24.96 | 24.12 | 24.22 | 23.34 | 23.86 | 24.23 | 24.21 | 25.17 | 25.69 | 24.42           |

1 Average of 11 months.

2 Five-year average.

## COTTON—Continued.

TABLE 179.—Cotton, middling: Monthly and yearly average spot price, cents per pound—Continued.

[Compiled from daily reports, Bureau of Markets and Crop Estimates.]

## LITTLE ROCK.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 7.67  | 8.15  | 9.04  | 9.07  | 8.59  | 8.58  | .....           |
| 1915-16.....     | 8.61  | 10.08 | 12.82 | 11.68 | 12.15 | 12.28 | 11.94 | 11.58 | 12.25 | 12.80 | 12.96 | 13.07 | 11.94           |
| 1916-17.....     | 14.27 | 15.26 | 17.83 | 19.58 | 18.50 | 17.70 | 16.81 | 17.89 | 19.71 | 19.99 | 23.90 | 26.42 | 18.89           |
| 1917-18.....     | 25.49 | 22.14 | 26.72 | 28.26 | 29.55 | 31.02 | 30.96 | 32.53 | 33.32 | 30.00 | 29.29 | 29.35 | 29.05           |
| 1918-19.....     | 30.73 | 33.99 | 31.70 | 30.11 | 29.37 | 28.20 | 26.45 | 26.83 | 26.40 | 28.33 | 31.34 | 33.55 | 29.75           |
| 1919-20.....     | 31.73 | 30.31 | 35.32 | 40.08 | 39.94 | 39.98 | 39.10 | 40.19 | 42.57 | 41.45 | 40.31 | 39.60 | 38.38           |
| 1920-21.....     | 34.89 | 28.28 | 21.38 | 18.23 | 14.96 | 14.45 | 13.35 | 11.49 | 10.63 | 11.35 | 10.68 | 10.58 | 16.69           |
| 1921-22.....     | 11.81 | 19.60 | 19.75 | 18.12 | 17.94 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 24.29 | 23.34 | 24.13 | 24.66 | 24.13 | 23.94 | 23.10 | 23.47 | 24.15 | 23.99 | 24.74 | 25.26 | 24.10           |

## DALLAS.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 7.87  | 8.25  | 9.15  | 8.71  | 8.57  | 8.25  | .....           |
| 1915-16.....     | 8.56  | 10.17 | 11.72 | 11.13 | 11.73 | 11.84 | 11.37 | 11.63 | 11.78 | 12.47 | 12.72 | 13.04 | 11.51           |
| 1916-17.....     | 14.14 | 14.53 | 16.51 | 19.18 | 17.63 | 17.17 | 15.75 | 17.77 | 19.09 | 19.58 | 24.17 | 25.04 | 18.43           |
| 1917-18.....     | 24.86 | 21.88 | 26.16 | 27.46 | 28.53 | 30.74 | 30.71 | 32.56 | 31.32 | 28.55 | 29.76 | 29.79 | 28.47           |
| 1918-19.....     | 31.09 | 33.34 | 30.89 | 28.78 | 29.33 | 27.72 | 25.84 | 25.71 | 27.02 | 29.75 | 32.10 | 34.16 | 29.64           |
| 1919-20.....     | 31.05 | 30.00 | 36.65 | 40.58 | 41.11 | 42.08 | 41.29 | 42.75 | 42.78 | 40.60 | 39.64 | 38.30 | 38.95           |
| 1920-21.....     | 32.74 | 28.40 | 20.69 | 17.08 | 13.70 | 13.63 | 12.16 | 10.64 | 10.53 | 11.20 | 10.28 | 10.50 | 15.79           |
| 1921-22.....     | 12.11 | 19.25 | 19.17 | 17.10 | 17.12 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 23.74 | 22.87 | 23.82 | 24.04 | 23.67 | 23.86 | 22.85 | 23.51 | 23.75 | 23.74 | 24.77 | 24.97 | 23.80           |

## HOUSTON.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1914-15.....     |       |       |       |       |       |       | 8.33  | 8.80  | 9.82  | 9.21  | 9.06  | 8.85  | .....           |
| 1915-16.....     | 9.04  | 10.56 | 12.11 | 11.62 | 12.27 | 12.36 | 11.82 | 12.09 | 12.77 | 12.99 | 13.26 | 13.00 | 12.00           |
| 1916-17.....     | 14.79 | 15.39 | 17.42 | 19.80 | 18.10 | 17.64 | 16.05 | 18.18 | 19.43 | 20.13 | 24.60 | 25.54 | 18.92           |
| 1917-18.....     | 25.67 | 22.62 | 26.62 | 27.87 | 28.77 | 31.25 | 30.91 | 32.94 | 31.80 | 28.06 | 30.91 | 28.75 | 28.85           |
| 1918-19.....     | 31.26 | 33.70 | 32.05 | 30.01 | 30.26 | 28.56 | 27.00 | 27.43 | 27.33 | 30.15 | 32.04 | 33.24 | 30.26           |
| 1919-20.....     | 31.65 | 31.36 | 38.58 | 40.79 | 40.74 | 41.72 | 39.96 | 41.52 | 42.33 | 40.67 | 39.54 | 38.10 | 38.77           |
| 1920-21.....     | 32.94 | 27.33 | 20.98 | 17.56 | 14.16 | 13.95 | 12.62 | 10.95 | 10.59 | 11.85 | 11.02 | 11.69 | 16.33           |
| 1921-22.....     | 13.06 | 20.02 | 19.64 | 17.65 | 17.73 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 24.22 | 23.49 | 24.34 | 24.61 | 24.05 | 24.25 | 23.06 | 23.68 | 24.01 | 23.98 | 25.22 | 25.32 | 24.19           |

## GALVESTON.

| Crop year.       | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1915-16.....     | 9.15  | 10.59 | 12.20 | 11.66 | 12.30 | 12.39 | 11.89 | 12.14 | 12.30 | 12.98 | 13.36 | 13.71 | 12.06           |
| 1916-17.....     | 14.77 | 15.48 | 17.48 | 19.82 | 18.43 | 17.79 | 16.30 | 18.31 | 19.63 | 20.18 | 24.58 | 25.99 | 19.06           |
| 1917-18.....     | 25.70 | 22.66 | 26.82 | 28.07 | 29.11 | 31.28 | 31.10 | 33.06 | 32.23 | 28.40 | 30.89 | 29.37 | 29.06           |
| 1918-19.....     | 31.56 | 34.19 | 32.25 | 30.30 | 30.64 | 29.45 | 28.28 | 26.94 | 27.63 | 30.59 | 32.87 | 34.62 | 30.78           |
| 1919-20.....     | 31.67 | 31.58 | 37.10 | 41.32 | 41.87 | 42.53 | 41.10 | 42.52 | 42.99 | 41.64 | 39.83 | 38.59 | 39.41           |
| 1920-21.....     | 33.78 | 28.15 | 21.98 | 18.10 | 15.00 | 14.38 | 12.99 | 11.76 | 11.47 | 12.01 | 11.27 | 11.80 | 16.89           |
| 1921-22.....     | 13.33 | 20.33 | 20.05 | 17.99 | 17.92 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 6-year average.. | 24.47 | 23.78 | 24.64 | 24.88 | 24.56 | 24.64 | 23.61 | 24.12 | 24.38 | 24.30 | 25.47 | 25.63 | 24.54           |

NEW ORLEANS.<sup>1</sup>

| Crop year.        | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Yearly average. |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| 1910-11.....      | 14.92 | 13.49 | 14.21 | 14.50 | 14.85 | 14.95 | 14.62 | 14.54 | 14.70 | 15.48 | 15.26 | 14.80 | 14.65           |
| 1911-12.....      | 11.96 | 11.29 | 9.61  | 9.35  | 9.17  | 9.53  | 10.31 | 10.65 | 11.61 | 11.72 | 12.07 | 12.93 | 10.85           |
| 1912-13.....      | 12.07 | 11.87 | 10.95 | 12.15 | 12.61 | 12.53 | 12.51 | 12.45 | 12.44 | 12.29 | 12.44 | 12.94 | 12.20           |
| 1913-14.....      | 12.02 | 13.11 | 13.78 | 13.26 | 12.98 | 12.93 | 12.90 | 12.95 | 13.11 | 13.36 | 13.79 | 13.84 | 13.12           |
| 1914-15.....      | (*)   | 8.42  | 7.02  | 7.43  | 7.15  | 7.87  | 8.01  | 8.34  | 9.43  | 9.04  | 9.12  | 8.71  | 8.23            |
| 1915-16.....      | 8.94  | 10.40 | 11.95 | 11.50 | 11.89 | 12.04 | 11.45 | 11.73 | 11.88 | 12.61 | 12.90 | 13.02 | 11.63           |
| 1916-17.....      | 14.26 | 15.27 | 17.24 | 19.45 | 18.34 | 17.33 | 17.14 | 17.94 | 19.50 | 20.06 | 24.17 | 25.41 | 18.84           |
| 1917-18.....      | 25.10 | 21.68 | 26.76 | 28.08 | 29.07 | 31.07 | 30.82 | 32.76 | 32.05 | 28.92 | 30.71 | 29.50 | 28.97           |
| 1918-19.....      | 30.23 | 33.28 | 31.19 | 29.75 | 29.34 | 28.64 | 28.97 | 26.94 | 26.97 | 40.69 | 41.41 | 40.32 | 39.41           |
| 1919-20.....      | 31.38 | 30.58 | 35.30 | 39.58 | 39.89 | 40.28 | 39.40 | 40.69 | 41.41 | 40.32 | 39.63 | 38.41 | 38.21           |
| 1920-21.....      | 34.08 | 27.55 | 20.97 | 17.68 | 14.64 | 14.53 | 12.85 | 11.06 | 11.17 | 11.80 | 11.08 | 11.49 | 16.55           |
| 1921-22.....      | 12.78 | 19.35 | 18.99 | 17.27 | 17.16 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....           |
| 11-year average.. | 19.49 | 17.82 | 18.08 | 18.43 | 18.21 | 18.36 | 17.92 | 18.18 | 18.64 | 18.68 | 19.45 | 19.49 | 18.47           |

<sup>1</sup> Prior to February, 1915, figures compiled from market reports of the New York Cotton Exchange; later figures compiled from daily reports, Bureau of Markets and Crop Estimates.<sup>2</sup> Market closed.<sup>3</sup> No quotations prior to Sept. 23; average for 7 days' business.<sup>4</sup> Average for 11 months.<sup>5</sup> Ten-year average.

## COTTON—Continued.

TABLE 180.—Cotton: International trade, calendar years 1909-1920.

Expressing bales of 500 pounds gross weight or 478 pounds net. The figures for cotton refer to ginned cotton and linters, but not to mill waste, cotton batting, seeds (Trombon and Saidan).

| Country.                                    | Average, 1909-1913.     |                         | 1915                    |                         | 1919                    |                         | 1920                    |                         |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|   | Imports.                | Exports.                | Imports.                | Exports.                | Imports.                | Exports.                | Imports.                | Exports.                |
| <b>PRINCIPAL EXPORT-<br/>ING COUNTRIES.</b> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> | <i>1,000<br/>bales.</i> |
| Brazil.....                                 | 1                       | 83                      | .....                   | 12                      | .....                   | 56                      | .....                   | 114                     |
| British India.....                          | 60                      | 1,966                   | 27                      | 819                     | 14                      | 1,528                   | 24                      | 2,052                   |
| China.....                                  | 43                      | 240                     | 53                      | 360                     | 67                      | 299                     | 189                     | 105                     |
| Egypt.....                                  | ( <sup>1</sup> )        | 1,442                   | ( <sup>1</sup> )        | 1,040                   | ( <sup>1</sup> )        | 1,390                   | ( <sup>1</sup> )        | 829                     |
| Persia.....                                 | ( <sup>1</sup> )        | 109                     | 1                       | 9                       | 1                       | 11                      | .....                   | .....                   |
| Peru.....                                   | ( <sup>1</sup> )        | 87                      | .....                   | 99                      | .....                   | 183                     | ( <sup>1</sup> )        | .....                   |
| United States.....                          | 215                     | 9,008                   | 236                     | 4,431                   | 367                     | 7,045                   | 628                     | 6,651                   |
| <b>PRINCIPAL IMPORT-<br/>ING COUNTRIES.</b> |                         |                         |                         |                         |                         |                         |                         |                         |
| Austria-Hungary.....                        | 906                     | 12                      | .....                   | .....                   | .....                   | .....                   | 56                      | .....                   |
| Belgium.....                                | 496                     | 159                     | .....                   | .....                   | 239                     | 51                      | 506                     | 221                     |
| Canada.....                                 | 137                     | .....                   | 226                     | .....                   | 179                     | .....                   | 241                     | .....                   |
| France.....                                 | 1,436                   | 816                     | 656                     | 27                      | 1,007                   | 82                      | 1,083                   | 151                     |
| Germany.....                                | 2,258                   | 232                     | .....                   | .....                   | .....                   | .....                   | 691                     | 3                       |
| Italy.....                                  | 896                     | ( <sup>1</sup> )        | 661                     | ( <sup>1</sup> )        | 826                     | 2                       | 825                     | 1                       |
| Japan.....                                  | 1,405                   | .....                   | 1,886                   | .....                   | 2,190                   | .....                   | 2,176                   | .....                   |
| Mexico.....                                 | 23                      | * 1                     | .....                   | .....                   | .....                   | .....                   | .....                   | .....                   |
| Netherlands.....                            | 277                     | 145                     | 1                       | ( <sup>1</sup> )        | 114                     | 4                       | 124                     | 8                       |
| Russia.....                                 | 886                     | ( <sup>1</sup> )        | .....                   | .....                   | .....                   | .....                   | .....                   | .....                   |
| Spain.....                                  | 382                     | 1                       | 277                     | ( <sup>1</sup> )        | 341                     | 1                       | 375                     | 3                       |
| Sweden.....                                 | 93                      | 1                       | 33                      | .....                   | 76                      | 2                       | 113                     | .....                   |
| Switzerland.....                            | 113                     | .....                   | 38                      | .....                   | 115                     | .....                   | 97                      | .....                   |
| United Kingdom.....                         | 4,184                   | .....                   | 3,114                   | .....                   | 3,843                   | .....                   | 3,457                   | .....                   |
| Other countries.....                        | 215                     | 164                     | 25                      | 31                      | 97                      | 35                      | 167                     | 2                       |
| <b>Total.....</b>                           | <b>14,005</b>           | <b>13,956</b>           | <b>7,174</b>            | <b>6,828</b>            | <b>9,526</b>            | <b>10,689</b>           | <b>10,752</b>           | <b>10,140</b>           |

<sup>1</sup> Less than 500 bales.

\* Four-year average.

COTTONSEED.

TABLE 181.—Cottonseed: Production, by States, 1917–1921.

[As reported by the United States Bureau of the Census.]

| State.              | Production. |       |       |       |                   | Total value. |         |         |         |                   |
|---------------------|-------------|-------|-------|-------|-------------------|--------------|---------|---------|---------|-------------------|
|                     | 1917        | 1918  | 1919  | 1920  | 1921 <sup>1</sup> | 1917         | 1918    | 1919    | 1920    | 1921 <sup>1</sup> |
| Virginia.....       | 8           | 11    | 10    | 9     | 7                 | \$550        | \$740   | \$740   | \$230   | \$220             |
| North Carolina..... | 273         | 398   | 368   | 410   | 355               | 18,630       | 26,810  | 27,340  | 10,550  | 11,650            |
| South Carolina..... | 550         | 669   | 633   | 720   | 333               | 38,200       | 47,550  | 47,460  | 16,620  | 10,971            |
| Georgia.....        | 847         | 947   | 736   | 628   | 373               | 58,660       | 64,170  | 55,280  | 16,640  | 11,802            |
| Florida.....        | 25          | 17    | 8     | 8     | 6                 | 1,600        | 1,130   | 530     | 220     | 166               |
| Alabama.....        | 230         | 356   | 316   | 294   | 282               | 15,910       | 23,910  | 23,020  | 7,840   | 8,326             |
| Mississippi.....    | 402         | 545   | 427   | 397   | 287               | 26,900       | 35,840  | 28,100  | 9,570   | 11,225            |
| Louisiana.....      | 234         | 261   | 132   | 172   | 131               | 15,080       | 16,650  | 8,660   | 4,490   | 3,522             |
| Texas.....          | 1,396       | 1,199 | 1,379 | 1,934 | 980               | 89,290       | 74,679  | 82,640  | 41,350  | 27,957            |
| Arkansas.....       | 432         | 439   | 393   | 540   | 833               | 28,420       | 28,240  | 24,850  | 12,400  | 11,055            |
| Tennessee.....      | 107         | 147   | 138   | 145   | 151               | 7,090        | 9,440   | 9,210   | 3,700   | 4,736             |
| Missouri.....       | 27          | 28    | 28    | 35    | 35                | 1,730        | 1,760   | 2,040   | 790     | 1,033             |
| Oklahoma.....       | 426         | 256   | 452   | 594   | 236               | 26,310       | 15,920  | 27,130  | 11,210  | 5,308             |
| All other.....      | 39          | 57    | 54    | 85    | 57                | 2,150        | 3,160   | 3,460   | 1,380   | 1,021             |
| United States.....  | 5,040       | 5,360 | 5,074 | 5,971 | 3,721             | 333,550      | 349,490 | 340,470 | 136,990 | 108,972           |

<sup>1</sup> Preliminary.

TABLE 182.—Cottonseed: Farm price per ton on 15th of each month, 1910–1921.

| Year.     | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. | Yearly average. |
|-----------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|-----------------|
| 1910..... |          |          |          |          |         |          |          |          | \$26.23   | \$26.98  | \$25.36  | \$25.65  | \$26.02         |
| 1911..... | \$26.35  | \$25.61  | \$25.49  | \$26.12  | \$25.46 | \$23.35  | \$22.70  | \$20.45  | 18.09     | 18.78    | 16.69    | 16.70    | 21.93           |
| 1912..... | 16.57    | 16.81    | 18.21    | 18.62    | 19.21   | 19.24    | 19.04    | 18.02    | 17.61     | 18.04    | 18.57    | 21.42    | 18.45           |
| 1913..... | 21.98    | 22.01    | 21.55    | 21.69    | 21.88   | 21.54    | 21.37    | 20.24    | 21.07     | 22.01    | 22.46    | 23.48    | 21.79           |
| 1914..... | 22.70    | 23.37    | 23.60    | 24.17    | 23.56   | 23.62    | 22.78    | 20.16    | 13.68     | 15.28    | 14.01    | 17.73    | 20.46           |
| 1915..... | 19.14    | 23.33    | 22.32    | 22.69    | 22.07   | 20.82    | 20.05    | 20.14    | 20.93     | 33.73    | 34.01    | 35.54    | 24.57           |
| 1916..... | 36.85    | 36.75    | 36.56    | 38.13    | 37.91   | 35.79    | 36.06    | 35.22    | 41.13     | 47.19    | 55.82    | 56.35    | 42.81           |
| 1917..... | 52.53    | 51.43    | 53.18    | 55.94    | 55.61   | 57.19    | 56.90    | 56.61    | 57.55     | 65.02    | 69.33    | 68.29    | 58.30           |
| 1918..... | 67.51    | 66.95    | 68.27    | 68.08    | 68.16   | 66.03    | 64.11    | 61.34    | 67.90     | 65.85    | 64.97    | 65.05    | 66.18           |
| 1919..... | 64.93    | 64.65    | 64.00    | 64.28    | 63.53   | 63.80    | 64.24    | 66.23    | 62.13     | 66.95    | 72.65    | 69.07    | 65.66           |
| 1920..... | 69.88    | 69.34    | 67.18    | 68.71    | 69.58   | 66.16    | 61.64    | 43.22    | 29.96     | 28.94    | 26.00    | 19.83    | 51.73           |
| 1921..... | 18.96    | 19.76    | 18.92    | 17.23    | 17.28   | 17.06    | 13.75    | 23.06    | 27.19     | 31.05    | 29.15    | 28.78    | 22.18           |

## COTTONSEED OIL.

TABLE 183.—*Cottonseed oil: Monthly and yearly average price per hundredweight of spot prime summer yellow, New York, 1910-11 to 1921-22.*

[Compiled from New York Produce Exchange Reports and Oil, Paint, and Drug Reporter.]

| Crop year.        | Aug.    | Sept.   | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Average. |
|-------------------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910-11.....      | \$10.84 | \$10.12 | \$8.11 | \$7.29 | \$7.24 | \$7.32 | \$7.03 | \$6.60 | \$6.19 | \$6.55 | \$6.43 | \$5.89 | \$7.47   |
| 1911-12.....      | 5.85    | 6.96    | 5.97   | 5.73   | 5.37   | 5.39   | 5.54   | 5.69   | 6.46   | 7.13   | 6.86   | 6.67   | 6.14     |
| 1912-13.....      | 6.47    | 6.38    | 6.22   | 6.01   | 6.30   | 6.25   | 6.35   | 6.44   | 6.96   | 7.01   | 7.70   | 9.11   | 6.77     |
| 1913-14.....      | 8.88    | 7.67    | 7.00   | 7.05   | 6.86   | 6.98   | 7.12   | 7.38   | 7.51   | 7.18   | 7.30   | 7.18   | 7.34     |
| 1914-15.....      | 6.67    | 5.87    | 5.22   | 5.55   | 5.83   | 6.56   | 7.08   | 6.70   | 6.61   | 6.40   | 6.18   | 6.06   | 6.23     |
| 1915-16.....      | 5.78    | 6.30    | 7.71   | 7.93   | 8.38   | 8.99   | 9.59   | 10.53  | 10.73  | 10.91  | 10.91  | 10.04  | 8.98     |
| 1916-17.....      | 9.27    | 10.17   | 11.75  | 12.53  | 12.38  | 12.32  | 12.51  | 13.62  | 15.30  | 16.23  | 16.26  | 14.52  | 13.07    |
| 1917-18.....      | 14.84   | 16.44   | 17.99  | 18.59  | 18.65  | 20.09  | 20.33  | 19.84  | 19.75  | 20.00  | 20.25  | 20.25  | 18.91    |
| 1918-19.....      | 20.25   | 20.25   | 20.25  | 20.25  | 20.25  | 20.25  | 20.25  | 20.25  | 21.25  | 21.25  | 25.03  | 27.37  | 21.41    |
| 1919-20.....      | 25.83   | 21.33   | 23.00  | 22.75  | 21.50  | 21.86  | 19.67  | 19.07  | 18.54  | 19.21  | 16.70  | 13.21  | 20.23    |
| 1920-21.....      | 12.32   | 13.43   | 11.43  | 10.14  | 8.91   | 8.44   | 7.29   | 6.21   | 6.06   | 7.13   | 7.45   | 8.70   | 8.96     |
| 1921-22.....      | 8.73    | 9.90    | 8.67   | 8.31   | 8.29   |        |        |        |        |        |        |        |          |
| 11-year average.. | 11.55   | 11.36   | 11.38  | 11.26  | 11.06  | 11.31  | 11.16  | 11.12  | 11.40  | 11.73  | 11.92  | 11.78  | 11.41    |

<sup>1</sup> Largely nominal.TABLE 184.—*Cottonseed oil: International trade, calendar years, 1909-1920.*

[See "General note," Table 125.]

| Country.                              | Average, 1909-1913.   |                       | 1918                  |                       | 1919                  |                       | 1920                  |                       |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                       | Imports.              | Exports.              | Imports.              | Exports.              | Imports.              | Exports.              | Imports.              | Exports.              |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> | <i>1,000 gallons.</i> |
| China.....                            | 257                   | 231                   |                       | 2,369                 |                       | 3,430                 |                       | 1,606                 |
| Egypt.....                            | 629                   | 476                   |                       | 127                   | 5                     | 59                    | 30                    | 418                   |
| United States.....                    |                       | 38,968                | 2,450                 | 15,876                | 3,707                 | 25,751                | 1,261                 | 24,634                |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                       |                       |                       |                       |                       |                       |                       |                       |
| Algeria.....                          | 364                   | 157                   |                       |                       |                       |                       |                       |                       |
| Australia.....                        | 142                   |                       | 119                   |                       | 29                    |                       |                       |                       |
| Austria-Hungary.....                  | 39                    | 35                    |                       |                       |                       |                       |                       |                       |
| Belgium.....                          | 2,251                 | 1,086                 |                       |                       | 446                   | 316                   | 414                   | 189                   |
| Brazil.....                           | 624                   | 42                    | 7                     | 611                   | 11                    | 656                   | 21                    | 1,013                 |
| Canada.....                           | 2,817                 |                       | 6,255                 |                       | 5,515                 |                       | 6,091                 |                       |
| France.....                           | 3,289                 | 335                   | 461                   | 5                     | 1,384                 | 12                    | 2,677                 | 81                    |
| Germany.....                          | 6,918                 |                       |                       |                       |                       |                       |                       |                       |
| Italy.....                            | 4,600                 | 1                     | 4                     |                       | 1,095                 | 43                    | 4,029                 | 1                     |
| Malta.....                            | 265                   | 427                   |                       |                       |                       |                       |                       |                       |
| Martinique.....                       | 292                   |                       |                       |                       |                       |                       |                       |                       |
| Mexico.....                           | 3,607                 | 341                   |                       |                       | 5,837                 | 1,709                 | 2,602                 | 731                   |
| Netherlands.....                      | 5,352                 | 52                    |                       |                       | 1,584                 |                       | 2,521                 |                       |
| Norway.....                           | 1,504                 |                       | 101                   |                       | 41                    |                       |                       |                       |
| Rumania.....                          |                       | (?)                   |                       |                       |                       |                       |                       |                       |
| Senegal.....                          | 422                   |                       |                       |                       |                       |                       |                       |                       |
| Serbia.....                           | 336                   |                       |                       |                       |                       |                       |                       |                       |
| Sweden.....                           | 696                   | 13                    | 2                     |                       | 1,287                 | 41                    |                       |                       |
| United Kingdom.....                   | 5,899                 | 7,189                 | 5,727                 | 15                    | 8,035                 | 2,930                 | 2,802                 | 5,162                 |
| Other countries.....                  | 3,582                 | 6                     | 2,044                 | 902                   | 2,165                 | 961                   | 925                   |                       |
| Total.....                            | 44,493                | 43,929                | 17,170                | 19,905                | 31,141                | 35,908                | 23,673                | 33,808                |

<sup>1</sup> Three-year average.<sup>2</sup> Less than 500 gallons.<sup>3</sup> Four-year average.<sup>4</sup> One-year average.<sup>5</sup> Two-year average.

## TOBACCO.

TABLE 185.—Tobacco: Area and production in undermentioned countries, 1909–1920.

| Country.                    | Area.                                  |                 |                 |                 | Production.                            |                  |                  |                  |
|-----------------------------|--|-----------------|-----------------|-----------------|--|------------------|------------------|------------------|
|                             | Average<br>1909–<br>1913. <sup>1</sup> | 1918            | 1919            | 1920            | Average<br>1909–<br>1913. <sup>1</sup> | 1918             | 1919             | 1920             |
| <b>NORTH AMERICA.</b>       | 1,000<br>acres.                        | 1,000<br>acres. | 1,000<br>acres. | 1,000<br>acres. | 1,000<br>pounds.                       | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. |
| United States.....          | 1,148                                  | 1,647           | 1,951           | 1,960           | 996,176                                | 1,439,071        | 1,465,481        | 1,582,225        |
| Porto Rico.....             | 18                                     | 24              | 40              | 42              | 12,700                                 | 17,196           | 23,600           | 25,340           |
| <b>Canada:</b>              |  |                 |                 |                 |  |                  |                  |                  |
| Quebec.....                 | 10                                     | 7               | 23              | 33              | 6,262                                  | 7,732            | 16,770           | 26,400           |
| Ontario.....                | 4                                      | 6               | 9               | 20              | 8,372                                  | 6,500            | 17,000           | 21,689           |
| Total Canada.....           | 14                                     | 13              | 32              | 53              | 14,634                                 | 14,232           | 33,770           | 48,089           |
| <b>Costa Rica.....</b>      |  |                 |                 |                 |  |                  | 228              |                  |
| Cuba.....                   |  |                 |                 |                 | 57,490                                 |                  |                  |                  |
| Dominican Republic.....     |  |                 | 25              |                 | 29,200                                 | 25,000           | 30,000           |                  |
| Guatemala.....              |  |                 |                 |                 | 674                                    | 1,049            |                  |                  |
| Jamaica.....                | 1                                      |                 |                 |                 | 418                                    |                  |                  |                  |
| Mexico.....                 |  |                 |                 |                 | 34,711                                 | 27,963           |                  |                  |
| <b>SOUTH AMERICA.</b>       |  |                 |                 |                 |  |                  |                  |                  |
| Argentina.....              | 24                                     | 27              |                 | 15              | 28,568                                 | 9,266            |                  |                  |
| Brazil.....                 |  |                 |                 |                 | 59,991                                 |                  | 53,900           |                  |
| Chile.....                  | 2                                      | 3               |                 |                 | 3,377                                  | 6,929            |                  |                  |
| Uruguay.....                | 3                                      | 2               |                 | 1               | 2,371                                  | 949              |                  |                  |
| Paraguay.....               |  | 35              |                 |                 | 13,000                                 | 30,864           | 35,274           |                  |
| <b>EUROPE.</b>              |  |                 |                 |                 |  |                  |                  |                  |
| Austria.....                | 49                                     |                 |                 |                 | 14,169                                 |                  |                  |                  |
| Croatia-Slavonia.....       |  |                 |                 |                 | 107                                    |                  |                  |                  |
| Bosnia-Herzegovina.....     |  |                 |                 |                 | 9,833                                  |                  |                  |                  |
| Belgium.....                | 10                                     | 15              | 17              | 7               | 20,741                                 |                  | 30,050           | 13,490           |
| Bulgaria.....               | 24                                     | 89              | 55              | 63              | 15,220                                 |                  | 35,260           | 55,490           |
| Denmark.....                | 1                                      |                 |                 |                 | 210                                    |                  |                  |                  |
| France.....                 | 29                                     | 20              | 23              | 29              | 45,272                                 | 10,568           | 34,670           | 46,031           |
| Germany.....                | 39                                     | 29              | 31              | 32              | 66,536                                 | 51,528           | 45,379           |                  |
| Greece.....                 |  | 116             |                 | 86              |  | 63,165           | 57,195           | 63,500           |
| Hungary.....                | 120                                    |                 |                 | 51              | 143,123                                |                  |                  |                  |
| Italy.....                  | 19                                     | 17              | 21              | 20              | 22,120                                 | 10,841           | 21,160           | 23,360           |
| Netherlands.....            | 1                                      | 1               | 1               | 1               | 1,829                                  |                  |                  |                  |
| Rumania.....                | 25                                     | 32              | 36              | 40              | 16,426                                 | 13,470           | 26,477           | 5,370            |
| Russia proper.....          | 108                                    |                 |                 |                 | 177,107                                |                  |                  |                  |
| Northern Caucasia.....      | 64                                     |                 |                 |                 | 55,842                                 |                  |                  |                  |
| Serbia.....                 | 5                                      |                 |                 |                 | 3,988                                  |                  |                  |                  |
| Sweden.....                 | 1                                      | 1               | 1               |                 | 1,657                                  | 1,389            |                  | 1,690            |
| Switzerland.....            | 1                                      | 1               | 1               | 1               | 1,444                                  |                  | 660              | 860              |
| <b>ASIA.</b>                |  |                 |                 |                 |  |                  |                  |                  |
| British India.....          | 1,026                                  | 1,015           |                 |                 | 450,000                                |                  |                  |                  |
| British North Borneo.....   |  | 2               |                 |                 | 2,891                                  |                  |                  |                  |
| Ceylon.....                 | 14                                     | 18              |                 |                 | 4,273                                  |                  |                  |                  |
| Dutch East Indies:          |  |                 |                 |                 |  |                  |                  |                  |
| Java and Madura.....        | 432                                    |                 |                 |                 | 117,180                                | 61,480           |                  |                  |
| Sumatra, east coast of..... |  |                 |                 |                 | 46,699                                 | 51,801           |                  |                  |
| Japanese Empire:            |  |                 |                 |                 |  |                  |                  |                  |
| Japan.....                  | 72                                     | 64              | 76              | 76              | 93,717                                 | 83,544           | 107,480          | 113,360          |
| Chosen (Korea).....         | 46                                     |                 |                 |                 | 29,737                                 |                  |                  |                  |
| Formosa.....                | 1                                      |                 |                 |                 | 1,120                                  |                  |                  |                  |
| Philippine Islands.....     | 155                                    | 194             | 182             | 250             | 63,907                                 | 135,705          | 124,560          | 143,070          |
| Russia, Asiatic.....        | 37                                     |                 |                 |                 | 30,939                                 |                  |                  |                  |
| <b>AFRICA.</b>              |  |                 |                 |                 |  |                  |                  |                  |
| Algeria.....                | 21                                     | 27              | 43              | 32              | 23,974                                 | 33,069           | 31,660           | 24,650           |
| Tunis.....                  |  | (7)             | 1               | 1               | 259                                    | 484              | 620              |                  |
| Nyasaland.....              |  | 9               | 6               | 8               | 2,416                                  | 4,701            | 2,553            | 4,000            |
| Rhodesia.....               | 5                                      | 3               | 5               |                 | 901                                    | 620              | 1,468            | 2,930            |
| Union of South Africa.....  | 19                                     | 23              |                 |                 | 13,789                                 | 14,931           | 14,183           | 11,644           |
| <b>OCEANIA.</b>             |  |                 |                 |                 |  |                  |                  |                  |
| Australia.....              | 2                                      | 1               | 2               | 2               | 1,837                                  | 459              | 2,664            | 2,352            |
| Fiji.....                   |  | 1               |                 |                 | 43                                     |                  |                  |                  |

<sup>1</sup> Five-year average except in a few cases where statistics were unavailable.

<sup>2</sup> Unofficial.

<sup>3</sup> State of Bahia.

<sup>4</sup> Old boundaries.

<sup>5</sup> Former Kingdom and Bessarabia.

<sup>6</sup> Bessarabia only.

<sup>7</sup> Less than 500.

<sup>8</sup> Cultivated by Europeans.

<sup>9</sup> Southern Rhodesia.

<sup>10</sup> Excluding native locations, reserves, etc.

<sup>11</sup> Excludes Victoria.



## TOBACCO—Continued.

TABLE 186.—Tobacco: World production as far as reported, 1900–1920.

| Year.     | Production.    | Year. | Production.    | Year. | Production.    | Year. | Production.    |
|-----------|----------------|-------|----------------|-------|----------------|-------|----------------|
|           | <i>Pounds.</i> |       | <i>Pounds.</i> |       | <i>Pounds.</i> |       | <i>Pounds.</i> |
| 1900..... | 2,201,193,000  | 1906  | 2,270,288,000  | 1912  | 1,274,319,000  | 1918  | 2,138,274,000  |
| 1901..... | 2,270,213,000  | 1907  | 2,391,061,000  | 1913  | 2,149,258,000  | 1919  | 2,178,382,000  |
| 1902..... | 2,376,054,000  | 1908  | 2,382,601,000  | 1914  | 2,254,087,000  | 1920  | 2,175,351,000  |
| 1903..... | 2,401,268,000  | 1909  | 2,742,500,000  | 1915  | 2,153,395,000  | 1921  | .....          |
| 1904..... | 2,146,641,000  | 1910  | 2,833,729,000  | 1916  | 1,547,867,000  | 1922  | .....          |
| 1905..... | 2,279,728,000  | 1911  | 2,566,202,000  | 1917  | 1,766,780,000  | 1923  | .....          |

TABLE 187.—Tobacco: Acreage, production, value, condition, etc., in the United States, 1849–1921.

[See note for Table 117.]

| Year.     | Acreage<br>(000<br>omitted). | Average<br>yield<br>per<br>acre. | Production<br>(000<br>omitted). | Average<br>farm<br>price<br>per<br>pound<br>Dec. 1. | Farm<br>value<br>Dec. 1<br>(000<br>omitted). | Domestic<br>exports<br>of unman-<br>ufactured,<br>fiscal year<br>beginning<br>July 1. | Imports<br>of un-<br>manufactured,<br>fiscal year<br>beginning<br>July 1. | Condition of growing<br>crop. |               |               |                         |
|-----------|------------------------------|----------------------------------|---------------------------------|---|--|---|---|-------------------------------|---------------|---------------|-------------------------|
|           |                              |                                  |                                 |   |  |   |   | July<br>1.                    | Aug.<br>1.    | Sept.<br>1.   | When<br>har-<br>vested. |
|           | <i>Acres.</i>                | <i>Lbs.</i>                      | <i>Pounds.</i>                  | <i>Cts.</i>   | <i>Dolls.</i>                                | <i>Pounds.</i>  | <i>Pounds.</i>  | <i>P. ct.</i>                 | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i>           |
| 1849..... | .....                        | .....                            | 160,763                         | .....   | .....  | .....   | .....   | .....                         | .....         | .....         | .....                   |
| 1859..... | .....                        | .....                            | 424,806                         | .....   | .....  | .....   | .....   | .....                         | .....         | .....         | .....                   |
| 1869..... | .....                        | .....                            | 262,736                         | .....   | .....  | .....   | .....   | 100.0                         | 92.7          | 78.1          | 83.7                    |
| 1879..... | 639                          | 793.1                            | 506,663                         | 6.0   | 30,200                                       | .....   | .....   | 88.0                          | 77.0          | 87.0          | .....                   |
| 1889..... | 696                          | 658.5                            | 457,881                         | 6.9   | 31,696                                       | .....   | .....   | 89.9                          | 84.4          | 76.2          | 80.7                    |
| 1899..... | 1,102                        | 728.5                            | 802,397                         | 7.1   | 57,273                                       | .....   | .....   | 83.7                          | 80.0          | 84.0          | 81.9                    |
| 1900..... | 1,046                        | 778.0                            | 814,345                         | 6.6   | 53,661                                       | 315,787,782   | 26,851,253  | 83.5                          | 82.9          | 77.5          | 76.1                    |
| 1901..... | 1,039                        | 788.0                            | 818,953                         | 7.1   | 58,283                                       | 301,007,365   | 29,428,837  | 86.5                          | 72.1          | 78.2          | 81.5                    |
| 1902..... | 1,031                        | 797.3                            | 821,824                         | 7.0   | 57,564                                       | 368,184,084   | 34,016,956  | 85.6                          | 81.2          | 81.5          | 84.1                    |
| 1903..... | 1,038                        | 786.3                            | 815,972                         | 6.8   | 55,515                                       | 311,971,831   | 31,162,636  | 85.1                          | 82.9          | 83.4          | 82.3                    |
| 1904..... | 806                          | 819.0                            | 660,461                         | 8.1   | 53,383                                       | 334,302,091   | 33,288,378  | 85.3                          | 83.9          | 83.7          | 85.6                    |
| 1905..... | 776                          | 815.6                            | 633,034                         | 8.5   | 53,519                                       | 312,227,202   | 41,125,970  | 87.4                          | 84.1          | 85.1          | 85.8                    |
| 1906..... | 796                          | 857.2                            | 682,429                         | 10.0  | 68,233                                       | 340,742,864   | 40,838,807  | 86.7                          | 87.2          | 86.2          | 84.6                    |
| 1907..... | 821                          | 850.5                            | 698,126                         | 10.2  | 71,411                                       | 330,812,658   | 35,005,131  | 81.3                          | 82.8          | 82.5          | 84.8                    |
| 1908..... | 875                          | 820.2                            | 718,061                         | 10.3  | 74,130                                       | 287,900,946   | 43,123,196  | 86.6                          | 85.8          | 84.3          | 84.1                    |
| 1909..... | 1,295                        | 814.8                            | 1,055,133                       | 10.1  | 106,374                                      | 357,196,074   | 46,853,389  | 89.3                          | 83.4          | 80.2          | 81.3                    |
| 1910..... | 1,366                        | 807.7                            | 1,103,415                       | 9.3   | 102,142                                      | 355,327,072   | 48,208,283  | 85.3                          | 78.5          | 77.7          | 80.2                    |
| 1911..... | 1,013                        | 893.7                            | 905,109                         | 9.4   | 85,210                                       | 379,845,320   | 54,740,380  | 72.6                          | 68.0          | 71.1          | 80.5                    |
| 1912..... | 1,226                        | 788.5                            | 962,855                         | 10.8  | 104,063                                      | 418,795,906   | 67,977,118  | 87.7                          | 82.8          | 81.1          | 81.8                    |
| 1913..... | 1,216                        | 784.3                            | 953,784                         | 12.8  | 122,481                                      | 449,749,982   | 61,174,751  | 82.8                          | 78.3          | 74.5          | 76.6                    |
| 1914..... | 1,224                        | 845.7                            | 1,034,679                       | 9.8   | 101,411                                      | 343,346,091   | 45,764,728  | 66.0                          | 66.5          | 71.4          | 81.8                    |
| 1915..... | 1,370                        | 775.4                            | 1,062,237                       | 9.1   | 98,281                                       | 443,293,156   | 48,013,335  | 85.5                          | 79.7          | 80.7          | 81.9                    |
| 1916..... | 1,413                        | 816.0                            | 1,153,278                       | 14.7  | 169,672                                      | 411,598,860   | 46,136,347  | 87.6                          | 84.4          | 85.5          | 85.6                    |
| 1917..... | 1,518                        | 823.1                            | 1,249,276                       | 24.0  | 300,449                                      | 289,170,686   | 79,267,663  | 86.8                          | 83.1          | 84.5          | 87.8                    |
| 1918..... | 1,647                        | 873.7                            | 1,439,071                       | 28.0  | 402,264                                      | 629,287,761   | 83,951,103  | 83.1                          | 83.6          | 82.4          | 87.4                    |
| 1919..... | 1,951                        | 751.1                            | 1,465,481                       | 39.0  | 570,808                                      | 643,037,655   | 94,005,182  | 83.6                          | 75.1          | 71.8          | 73.6                    |
| 1920..... | 1,960                        | 807.3                            | 1,582,225                       | 21.2  | 335,675                                      | .....   | .....   | 84.3                          | 84.1          | 84.6          | 83.3                    |
| 1921..... | 1,435                        | 749.4                            | 1,075,418                       | 19.9  | 228,755                                      | .....   | .....   | 71.9                          | 66.6          | 70.5          | 75.6                    |

\*Figures adjusted to census basis.

TOBACCO—Continued.

TABLE 188.—Tobacco: Acreage, production, and total farm value, by States, 1920-21.

| State               | Thousands of acres. |       | Production (thousands of pounds). |           | Total value, basis Dec. 1 price (thousands of dollars). |         |
|---------------------|---------------------|-------|-----------------------------------|-----------|---|---------|
|                     | 1920                | 1921  | 1920                              | 1921      | 1920  | 1921    |
| Massachusetts.....  | 10                  | 10    | 15,500                            | 13,700    | 6,268   | 4,932   |
| Connecticut.....    | 30                  | 31    | 44,400                            | 45,074    | 15,540  | 15,480  |
| New York.....       | 2                   | 2     | 2,560                             | 2,500     | 691   | 452     |
| Pennsylvania.....   | 43                  | 42    | 64,930                            | 61,320    | 12,938  | 8,880   |
| Maryland.....       | 35                  | 26    | 30,625                            | 18,590    | 8,551   | 3,532   |
| Virginia.....       | 246                 | 167   | 179,580                           | 91,850    | 43,099  | 13,829  |
| West Virginia.....  | 10                  | 8     | 5,000                             | 6,000     | 2,000   | 1,440   |
| North Carolina..... | 625                 | 450   | 433,750                           | 232,000   | 109,739   | 65,520  |
| South Carolina..... | 100                 | 80    | 65,000                            | 50,400    | 9,750   | 5,544   |
| Georgia.....        | 22                  | 14    | 13,200                            | 7,896     | 4,584   | 1,974   |
| Florida.....        | 4                   | 4     | 4,200                             | 3,600     | 2,016   | 1,440   |
| Ohio.....           | 63                  | 42    | 60,480                            | 35,640    | 7,862   | 5,796   |
| Indiana.....        | 22                  | 14    | 19,800                            | 12,250    | 2,772   | 1,633   |
| Wisconsin.....      | 50                  | 48    | 62,400                            | 61,488    | 16,162  | 7,686   |
| Missouri.....       | 5                   | 4     | 5,000                             | 3,700     | 1,650   | 740     |
| Kentucky.....       | 560                 | 385   | 476,000                           | 325,710   | 71,400  | 50,455  |
| Tennessee.....      | 130                 | 105   | 94,900                            | 78,750    | 18,960  | 15,750  |
| Alabama.....        | 2                   | 2     | 1,400                             | 1,500     | 770   | 390     |
| United States.....  | 1,960               | 1,435 | 1,582,225                         | 1,075,418 | 335,675   | 213,846 |

TABLE 189.—Tobacco: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | July.          | August.        | September.     | October.       | November production estimate. | Final estimate.        |
|--------------|----------------|----------------|----------------|----------------|-------------------------------|------------------------|
|              | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i>                | <i>Pounds.</i>         |
| 1912.....    | 1,009,000      | 980,000        | 976,000        | 974,000        | 959,437                       | 962,855                |
| 1913.....    | 926,000        | 896,000        | 861,000        | 877,000        | 903,575                       | 953,734                |
| 1914.....    | 756,961        | 791,379        | 862,473        | 954,245        | 982,715                       | 1,034,679              |
| 1915.....    | 1,104,709      | 1,082,644      | 1,120,149      | 1,068,804      | 1,050,025                     | 1,062,237              |
| 1916.....    | 1,191,326      | 1,196,659      | 1,223,572      | 1,203,077      | 1,148,590                     | 1,153,273              |
| 1917.....    | 1,226,912      | 1,270,050      | 1,221,196      | 1,243,023      | 1,188,478                     | 1,249,276              |
| 1918.....    | 1,187,123      | 1,228,081      | 1,213,165      | 1,265,362      | 1,266,696                     | 1,439,071              |
| 1919.....    | 1,453,102      | 1,336,062      | 1,279,012      | 1,278,062      | 1,316,553                     | 1,465,431              |
| 1920.....    | 1,500,800      | 1,544,489      | 1,553,812      | 1,478,788      | 1,476,444                     | 1,582,225              |
| Average..... | 1,150,659      | 1,147,151      | 1,146,152      | 1,152,485      | 1,142,971                     | 1,211,426              |
| 1921.....    | 932,157        | 889,266        | 943,324        | 991,564        | 1,020,874                     | <sup>1</sup> 1,075,418 |

<sup>1</sup> Preliminary.

TABLE 190.—Tobacco: Condition of crop, United States, on 1st of months named, 1900-1921.

| Year      | July. | Aug. | Sept. | Oct. | Year.     | July. | Aug. | Sept. | Oct. |
|-----------|-------|------|-------|------|-----------|-------|------|-------|------|
| 1900..... | 82.5  | 82.9 | 77.5  | 76.1 | 1911..... | 72.6  | 68.0 | 71.1  | 80.5 |
| 1901..... | 86.5  | 72.1 | 78.2  | 81.5 | 1912..... | 57.7  | 82.8 | 81.1  | 81.8 |
| 1902..... | 85.6  | 81.2 | 81.5  | 84.1 | 1913..... | 82.8  | 78.3 | 74.5  | 76.6 |
| 1903..... | 85.1  | 82.9 | 83.4  | 82.3 | 1914..... | 66.0  | 66.5 | 71.4  | 81.8 |
| 1904..... | 85.3  | 83.9 | 83.7  | 85.6 | 1915..... | 85.5  | 79.7 | 80.7  | 81.9 |
| 1905..... | 87.4  | 84.1 | 85.1  | 85.8 | 1916..... | 87.6  | 84.4 | 85.5  | 85.6 |
| 1906..... | 86.7  | 87.2 | 86.2  | 84.6 | 1917..... | 86.8  | 82.1 | 84.5  | 87.8 |
| 1907..... | 81.3  | 82.8 | 82.5  | 84.3 | 1918..... | 83.1  | 83.6 | 82.6  | 87.4 |
| 1908..... | 86.6  | 85.8 | 84.3  | 84.1 | 1919..... | 83.6  | 75.1 | 71.8  | 73.6 |
| 1909..... | 89.8  | 88.4 | 80.2  | 81.3 | 1920..... | 84.3  | 84.1 | 84.6  | 83.3 |
| 1910..... | 85.3  | 78.5 | 77.7  | 80.2 | 1921..... | 71.9  | 66.6 | 70.5  | 75.6 |

## TOBACCO—Continued.

TABLE 191.—Tobacco: Yield per acre, price per pound December 1, and value per acre, by States.

| State.     | Yield per acre (pounds).  |       |       |       |       |       | Farm price per pound (cents). |      |      |      |      |      |      |      |      |      | Value per acre (dollars). <sup>1</sup> |                           |        |
|------------|---------------------------|-------|-------|-------|-------|-------|-------------------------------|------|------|------|------|------|------|------|------|------|--|---------------------------|--------|
|            | 5-year average 1917-1921. | 1917  | 1918  | 1919  | 1920  | 1921  | 10-year average 1912-1921.    | 1912 | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 | 1919 | 1920 | 1921                                   | 5-year average 1916-1920. | 1921   |
| Mass.....  | 1,472                     | 1,400 | 1,500 | 1,540 | 1,550 | 1,370 | 30.3                          | 23.9 | 21.0 | 17.7 | 14.5 | 25.0 | 33.4 | 40.0 | 46.3 | 40.6 | 38.0                                   | 578.93                    | 493.20 |
| Conn.....  | 1,480                     | 1,400 | 1,500 | 1,531 | 1,480 | 1,454 | 31.2                          | 24.1 | 21.0 | 12.5 | 17.0 | 27.0 | 33.4 | 44.0 | 46.3 | 35.0 | 41.0                                   | 576.06                    | 506.14 |
| N. Y.....  | 1,264                     | 1,250 | 1,250 | 1,290 | 1,280 | 1,250 | 16.8                          | 12.6 | 12.2 | 12.0 | 9.5  | 11.9 | 22.0 | 18.0 | 22.5 | 27.0 | 19.2                                   | 252.15                    | 241.25 |
| Pa.....    | 1,422                     | 1,400 | 1,420 | 1,320 | 1,510 | 1,400 | 13.4                          | 8.5  | 7.5  | 8.5  | 9.2  | 14.2 | 21.0 | 14.0 | 17.0 | 20.0 | 14.4                                   | 242.39                    | 210.24 |
| Md.....    | 777                       | 790   | 830   | 675   | 875   | 715   | 17.8                          | 8.0  | 9.3  | 8.0  | 8.5  | 16.0 | 20.0 | 30.0 | 30.0 | 29.0 | 19.0                                   | 197.29                    | 135.85 |
| Va.....    | 658                       | 700   | 770   | 530   | 730   | 550   | 20.4                          | 12.0 | 13.9 | 9.0  | 9.4  | 14.6 | 25.0 | 27.0 | 47.4 | 42.4 | 20.5                                   | 183.82                    | 112.75 |
| W. Va..... | 754                       | 800   | 720   | 700   | 800   | 750   | 22.1                          | 11.0 | 12.0 | 11.0 | 10.0 | 15.0 | 25.0 | 38.0 | 50.0 | 25.0 | 24.0                                   | 231.30                    | 180.00 |
| N. C.....  | 650                       | 630   | 705   | 616   | 694   | 560   | 24.9                          | 16.0 | 18.5 | 11.5 | 11.2 | 20.0 | 31.5 | 35.1 | 53.6 | 25.3 | 28.0                                   | 212.33                    | 145.60 |
| S. C.....  | 638                       | 710   | 720   | 722   | 650   | 630   | 15.8                          | 10.9 | 13.8 | 9.7  | 7.0  | 14.0 | 23.1 | 31.1 | 22.8 | 15.0 | 11.0                                   | 144.57                    | 69.30  |
| Ga.....    | 698                       | 1,000 | 800   | 530   | 600   | 564   | 22.3                          | 23.0 | 31.0 | 25.0 | 23.0 | 27.0 | 57.0 | 45.0 | 21.5 | 37.0 | 25.0                                   | 318.39                    | 141.00 |
| Fla.....   | 992                       | 1,100 | 980   | 950   | 1,050 | 900   | 29.0                          | 30.0 | 31.0 | 30.0 | 23.0 | 30.0 | 57.0 | 45.0 | 54.5 | 48.0 | 40.0                                   | 490.67                    | 360.00 |
| Ohio.....  | 936                       | 960   | 980   | 860   | 950   | 920   | 15.8                          | 9.1  | 11.4 | 8.8  | 9.0  | 13.0 | 25.0 | 19.5 | 33.7 | 13.0 | 15.0                                   | 193.84                    | 138.00 |
| Ind.....   | 891                       | 950   | 930   | 800   | 900   | 875   | 15.4                          | 9.0  | 11.0 | 9.0  | 7.3  | 13.0 | 20.0 | 27.0 | 73.5 | 21.4 | 15.0                                   | 182.20                    | 131.25 |
| Wis.....   | 1,226                     | 1,000 | 1,330 | 1,270 | 1,248 | 1,281 | 15.3                          | 11.0 | 12.0 | 11.0 | 6.0  | 12.5 | 17.0 | 22.0 | 22.0 | 25.9 | 12.5                                   | 246.30                    | 160.12 |
| Mo.....    | 953                       | 940   | 900   | 1,000 | 1,000 | 925   | 20.0                          | 12.0 | 12.0 | 13.0 | 12.0 | 15.0 | 21.0 | 22.5 | 36.0 | 33.0 | 20.0                                   | 251.36                    | 185.00 |
| Ky.....    | 871                       | 900   | 950   | 800   | 850   | 848   | 16.3                          | 8.7  | 10.0 | 8.4  | 7.8  | 12.7 | 20.0 | 26.3 | 33.8 | 21.5 | 15.5                                   | 195.98                    | 131.13 |
| Tenn.....  | 780                       | 810   | 800   | 810   | 730   | 750   | 14.3                          | 7.1  | 8.4  | 7.5  | 6.3  | 10.0 | 11.0 | 21.4 | 25.1 | 20.0 | 20.0                                   | 147.80                    | 150.00 |
| Ala.....   | 702                       | 730   | 700   | 630   | 700   | 750   | 31.6                          | 35.0 | 25.0 | 28.0 | 22.0 | 30.0 | 35.0 | 30.0 | 30.0 | 55.0 | 28.0                                   | 225.90                    | 195.00 |
| La.....    | 431                       | 350   | 420   | 434   | 500   | 450   | 38.8                          | 30.0 | 25.0 | 35.0 | 30.0 | 28.0 | 35.0 | 65.0 | 65.0 | 40.0 | 35.0                                   | 200.72                    | 157.50 |
| U. S.....  | 802.8                     | 823.1 | 873.7 | 751.1 | 807.3 | 749.4 | 18.9                          | 10.8 | 12.8 | 9.8  | 9.1  | 14.7 | 24.0 | 28.0 | 39.0 | 21.2 | 19.9                                   | 205.22                    | 152.63 |

<sup>1</sup> Based upon farm price Dec. 1.

TABLE 192.—Tobacco: Extent and causes of yearly crop losses, 1909-1920.

| Year.        | Deficient moisture. |       | Excessive moisture. |       | Floods. | Frost and freeze. | Hail. | Hot winds. | Storms.          | Total climatic. | Plant disease.   | Insect pests. | Animal pests. | Defective seed.  | Total. |
|--------------|---------------------|-------|---------------------|-------|---------|-------------------|-------|------------|------------------|-----------------|------------------|---------------|---------------|------------------|--------|
|              | P. c.               | P. c. | P. c.               | P. c. | P. c.   | P. c.             | P. c. | P. c.      | P. c.            | P. c.           | P. c.            | P. c.         | P. c.         | P. c.            | P. c.  |
| 1920.....    | 2.3                 | 7.0   | 0.6                 | 0.7   | 1.0     | 0.1               | 11.7  | 5.5        | 2.6              | .....           | ( <sup>1</sup> ) | .....         | .....         | ( <sup>1</sup> ) | 21.0   |
| 1919.....    | 2.3                 | 7.9   | .6                  | .2    | 1.1     | 0.1               | 11.7  | 5.5        | 2.6              | .....           | .....            | .....         | .....         | ( <sup>1</sup> ) | 23.0   |
| 1918.....    | 2.6                 | .4    | .2                  | .7    | 1.1     | .2                | 11.4  | .3         | 2.1              | .....           | .1               | .....         | .....         | .1               | 14.2   |
| 1917.....    | 3.3                 | 2.2   | .5                  | 3.3   | 1.2     | .1                | 11.1  | .2         | 2.1              | .....           | .1               | .....         | .....         | .1               | 15.2   |
| 1916.....    | 3.5                 | 5.5   | 1.3                 | 1.3   | 1.0     | .1                | .8    | 14.0       | .3               | 2.8             | .....            | .....         | .....         | ( <sup>1</sup> ) | 18.4   |
| 1915.....    | 3.9                 | 8.2   | .9                  | 1.2   | .8      | .1                | .9    | 16.3       | .6               | 4.0             | .....            | .....         | .....         | .1               | 23.5   |
| 1914.....    | 18.1                | .8    | .1                  | .4    | .6      | .3                | .1    | 20.1       | ( <sup>1</sup> ) | 2.7             | .....            | .....         | .....         | .1               | 24.8   |
| 1913.....    | 15.3                | .7    | .4                  | 1.2   | 1.2     | .3                | .6    | 20.0       | .1               | 3.0             | .....            | .....         | .....         | ( <sup>1</sup> ) | 25.0   |
| 1912.....    | 7.6                 | 4.8   | .8                  | .5    | 1.0     | .2                | .2    | 15.3       | .7               | 2.8             | .....            | .....         | .....         | .1               | 21.2   |
| 1911.....    | 16.7                | .9    | .....               | .8    | .1      | .6                | ..... | 19.5       | .3               | 1.0             | .....            | .....         | .....         | .2               | 22.6   |
| 1910.....    | 4.3                 | 6.8   | 1.2                 | .4    | .3      | ( <sup>1</sup> )  | .1    | 14.4       | .7               | 2.8             | .....            | .....         | .....         | .1               | 20.6   |
| 1909.....    | 5.5                 | 6.8   | 1.1                 | .7    | .8      | .1                | .2    | 15.3       | .7               | 2.6             | .....            | .....         | .....         | ( <sup>1</sup> ) | 19.6   |
| Average..... | 7.7                 | 4.3   | .7                  | .9    | .8      | .3                | .3    | 15.7       | .8               | 2.6             | .....            | .....         | .....         | .1               | 20.8   |

<sup>1</sup> Less than 0.05 per cent.

TOBACCO—Continued.

TABLE 193.—Tobacco: Wholesale price per pound, 1921-1914.

| Date.                        | Hopkinsville.         |        |        | Louisville.                             |        |        | Richmond.                      |        |        | Baltimore.                           |        |        |
|------------------------------|-----------------------|--------|--------|---|--------|--------|--------------------------------|--------|--------|--------------------------------------|--------|--------|
|                              | Leaf, common to fine. |        |        | Leaf (Burley dark red), common to good. |        |        | Leaf, smokers' common to fine. |        |        | Leaf (Maryland), medium to fine red. |        |        |
|                              | Low.                  | High.  | Aver.  | Low.                                    | High.  | Aver.  | Low.                           | High.  | Aver.  | Low.                                 | High.  | Aver.  |
| 1921.                        | Cents.                | Cents. | Cents. | Cents.                                  | Cents. | Cents. | Cents.                         | Cents. | Cents. | Cents.                               | Cents. | Cents. |
| January.....                 | 8.00                  | 35.00  | 20.19  | 7.00                                    | 25.00  | 16.06  | 10.00                          | 20.00  | 15.00  | 18.00                                | 58.00  | 39.71  |
| February.....                | 8.00                  | 42.50  | 23.56  | 7.00                                    | 25.00  | 16.00  | 10.00                          | 30.00  | 20.00  | 18.00                                | 40.00  | 29.00  |
| March.....                   | 8.00                  | 45.00  | 25.12  | 7.00                                    | 25.00  | 16.00  | 10.00                          | 30.00  | 20.00  | 18.00                                | 40.00  | 29.00  |
| April.....                   | 8.00                  | 52.00  | 27.60  | 7.00                                    | 25.00  | 16.00  | 7.00                           | 30.00  | 12.88  | 18.00                                | 40.00  | 29.00  |
| May.....                     | 8.00                  | 55.00  | 25.25  | 7.00                                    | 25.00  | 16.00  | 7.00                           | 14.00  | 10.50  | 18.00                                | 40.00  | 29.00  |
| June <sup>1</sup> .....      |                       |        |        | 7.00                                    | 25.00  | 15.50  | 7.00                           | 14.00  | 10.50  | 18.00                                | 40.00  | 31.50  |
| July <sup>1</sup> .....      |                       |        |        | 8.00                                    | 30.00  | 16.00  | 7.00                           | 14.00  | 10.50  | 18.00                                | 40.00  | 29.00  |
| August <sup>1</sup> .....    |                       |        |        | 9.00                                    | 30.00  | 19.35  | 7.00                           | 14.00  | 10.50  | 18.00                                | 40.00  | 29.00  |
| September <sup>1</sup> ..... |                       |        |        | 11.00                                   | 30.00  | 20.50  | 7.00                           | 14.00  | 10.50  | 18.00                                | 40.00  | 29.00  |
| October <sup>1</sup> .....   |                       |        |        | 11.00                                   | 30.00  | 20.50  | 7.00                           | 14.00  | 10.50  | 18.00                                | 40.00  | 29.00  |
| November <sup>1</sup> .....  |                       |        |        | 12.00                                   | 30.00  | 21.00  | 7.00                           | 14.00  | 10.50  | 18.00                                | 45.00  | 31.50  |
| December.....                | 12.00                 | 45.00  | 25.12  | 12.00                                   | 30.00  | 21.00  | 7.00                           | 14.00  | 10.50  | 18.00                                | 45.00  | 31.50  |
|                              | 8.00                  | 55.00  | 24.47  | 7.00                                    | 30.00  | 17.83  | 7.00                           | 30.00  | 12.66  | 18.00                                | 45.00  | 30.52  |
| 1920.....                    | 14.00                 | 53.00  | 27.01  | 13.00                                   | 42.00  | 27.05  | 10.00                          | 37.00  | 24.40  | 25.00                                | 58.00  | 41.18  |
| 1919.....                    | 12.14                 | 36.50  | 21.90  | 10.00                                   | 48.00  | 26.60  | 15.00                          | 45.00  | 27.31  | 26.00                                | 40.00  | 37.22  |
| 1918.....                    | 14.00                 | 25.00  | 19.03  | 25.00                                   | 44.00  | 34.34  | 16.00                          | 45.00  | 28.74  | 22.00                                | 49.00  | 33.56  |
| 1917.....                    | 10.00                 | 20.50  | .....  | 13.00                                   | 32.00  | .....  | 9.00                           | 27.00  | .....  | 17.00                                | 28.00  | .....  |
| 1916.....                    | 5.00                  | 14.50  | .....  | 10.00                                   | 19.00  | .....  | 7.00                           | 18.00  | .....  | 9.00                                 | 21.00  | .....  |
| 1915.....                    | 4.00                  | 12.50  | .....  | 8.00                                    | 15.00  | .....  | 7.00                           | 20.00  | .....  | 8.00                                 | 14.00  | .....  |
| 1914.....                    | 7.50                  | 14.00  | .....  | 9.00                                    | 16.00  | .....  | 7.00                           | 20.00  | .....  | 8.00                                 | 15.00  | .....  |

<sup>1</sup> No quotations for Hopkinsville.

## TOBACCO—Continued.

TABLE 194.—*Tobacco (unmanufactured): International trade, calendar years 1909–1920.*

[Tobacco comprises leaf, stems, strippings, and tombac, but not snuff. See "General note," Table 125.]

| Country.                              | Average, 1909–1913.  |                      | 1913                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| Algeria.....                          | 4,776                | 11,681               | 2,128                | 14,835               | 3,941                | 25,518               | 6,409                | 23,724               |
| Brazil.....                           | 620                  | 59,991               | 1,216                | 63,957               | 1,476                | 93,882               | 2,176                | 67,376               |
| British India.....                    | 6,538                | 28,874               | 5,775                | 28,514               | 9,404                | 44,610               | 10,121               | 36,379               |
| Bulgaria.....                         | ( <sup>1</sup> )     | 4,310                |                      |                      |                      | 16,216               |                      | 38,793               |
| Ceylon.....                           |                      | 4,093                | 4                    | 4,737                | 2                    | 1,739                | 4                    | 3,590                |
| Cuba.....                             | 141                  | 38,035               | ( <sup>1</sup> )     | 27,351               |                      | 36,328               |                      |                      |
| Dominican Republic.....               |                      | 22,395               |                      | 33,510               |                      | 44,753               |                      |                      |
| Dutch East Indies.....                | 8,074                | 163,823              | 4,244                | 17,746               | 4,381                | 301,539              |                      |                      |
| Greece.....                           | 12,024               | 18,113               | 19                   | 30,835               | 282                  | 59,351               | 157                  | 59,276               |
| Mexico.....                           | 1,845                | 1,998                |                      |                      |                      |                      |                      |                      |
| Paraguay.....                         |                      | 11,361               |                      | 15,546               |                      | 22,759               |                      | 18,963               |
| Persia.....                           | 797                  | 3,374                | 339                  | 1,768                | 634                  | 3,721                |                      |                      |
| Philippine Islands.....               | 45                   | 26,018               | 184                  | 56,705               | 283                  | 49,564               | 793                  | 45,373               |
| Russia.....                           | 1,084                | 26,288               |                      |                      |                      |                      |                      |                      |
| United States.....                    | 52,763               | 351,127              | 83,514               | 406,827              | 85,986               | 776,673              | 82,221               | 479,900              |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Aden.....                             | 11,619               | 7,739                | 10,355               | 6,416                | 10,027               | 5,991                | 3,593                | 5,830                |
| Argentina.....                        | 14,988               | 41                   | 12,464               | 4,959                | 18,967               | 2,994                |                      |                      |
| Australia.....                        | 13,740               | ( <sup>1</sup> )     | 15,989               | ( <sup>1</sup> )     | 16,225               |                      |                      |                      |
| Austria-Hungary.....                  | 49,954               | 23,192               |                      |                      |                      |                      | 10,069               |                      |
| Belgium.....                          | 22,094               | 33                   |                      |                      | 30,096               | 66                   | 36,126               | 420                  |
| Canada.....                           | 17,891               | 433                  | 22,970               | 1,220                | 24,891               | 1,506                | 21,121               | 778                  |
| China.....                            | 15,113               | 25,437               | 24,145               | 25,200               | 21,310               | 49,044               | 30,310               | 36,982               |
| Denmark.....                          | 8,774                | 100                  | 3,682                | 2                    | 30,688               | 499                  | 15,900               | 76                   |
| Egypt.....                            | 19,005               |                      | 15,027               |                      | 17,998               |                      | 19,284               |                      |
| Finland.....                          | 9,597                |                      | 3,126                | 2                    | 5,493                |                      | 4,706                |                      |
| France.....                           | 63,914               | 26                   | 110,971              | 6                    | 108,153              | 375                  | 76,615               | 871                  |
| Germany.....                          | 168,437              | 116                  |                      |                      |                      |                      | 496,162              | 924                  |
| Italy.....                            | 47,732               | 3,008                | 42,150               | 1,375                | 63,093               | 648                  | 74,246               | 79                   |
| Netherlands.....                      | 57,218               | 3,786                | 831                  | 7,270                | 232,655              | 60,048               | 86,797               | 10,175               |
| Nigeria.....                          | 6,050                |                      |                      |                      |                      |                      |                      |                      |
| Norway.....                           | 3,994                |                      | 3,416                |                      | 11,381               |                      | 6,753                |                      |
| Portugal.....                         | 6,565                | 279                  | 1,747                | 41                   | 8,786                | 76                   |                      |                      |
| Spain.....                            | 51,026               |                      | 49,808               |                      | 70,422               |                      | 73,659               |                      |
| Sweden.....                           | 9,772                | 1                    | 7,484                |                      | 12,899               | ( <sup>1</sup> )     |                      |                      |
| Switzerland.....                      | 17,949               | 47                   | 13,866               |                      | 27,742               | 173                  | 29,003               | 112                  |
| United Kingdom.....                   | 117,956              | 4,603                | 171,428              | 4,514                | 339,517              | 5,997                | 209,721              | 4,850                |
| Other countries.....                  | 24,799               | 60,742               | 22,447               | 24,324               | 30,052               | 4,115                | 19,451               | 3,954                |
| <b>Total.....</b>                     | <b>846,929</b>       | <b>928,609</b>       | <b>629,309</b>       | <b>777,658</b>       | <b>1,186,734</b>     | <b>1,607,223</b>     | <b>1,315,367</b>     | <b>801,748</b>       |

<sup>1</sup> Less than 500 pounds.

## APPLES.

TABLE 195.—Apples: Production and farm prices December 1, by States, 1917-1921.

| State.              | Total crop (thousands of bushels). |         |         |         |        | Farm price per bushel Dec. 1 (cents). |       |       |       |       |
|---------------------|------------------------------------|---------|---------|---------|--------|---------------------------------------|-------|-------|-------|-------|
|                     | 1917                               | 1918    | 1919    | 1920    | 1921   | 1917                                  | 1918  | 1919  | 1920  | 1921  |
| Maine.....          | 4,275                              | 2,010   | 4,829   | 1,680   | 4,060  | 95                                    | 95    | 117   | 120   | 115   |
| New Hampshire.....  | 1,035                              | 1,155   | 1,364   | 1,200   | 700    | 120                                   | 110   | 160   | 150   | 175   |
| Vermont.....        | 1,248                              | 990     | 960     | 993     | 600    | 130                                   | 140   | 175   | 180   | 195   |
| Massachusetts.....  | 2,163                              | 2,430   | 3,187   | 3,575   | 1,125  | 155                                   | 160   | 200   | 120   | 240   |
| Rhode Island.....   | 195                                | 189     | 334     | 390     | 63     | 150                                   | 155   | 195   | 200   | 250   |
| Connecticut.....    | 1,251                              | 999     | 1,395   | 2,375   | 753    | 144                                   | 155   | 170   | 125   | 240   |
| New York.....       | 16,266                             | 40,873  | 14,350  | 47,087  | 12,557 | 132                                   | 112   | 200   | 75    | 205   |
| New Jersey.....     | 2,058                              | 2,463   | 1,666   | 2,942   | 667    | 125                                   | 160   | 200   | 120   | 270   |
| Pennsylvania.....   | 11,646                             | 16,080  | 5,513   | 18,534  | 2,208  | 126                                   | 120   | 225   | 90    | 260   |
| Delaware.....       | 798                                | 714     | 606     | 822     | 68     | 110                                   | 125   | 200   | 95    | 220   |
| Maryland.....       | 2,559                              | 2,034   | 1,519   | 2,600   | 225    | 97                                    | 110   | 200   | 78    | 195   |
| Virginia.....       | 11,773                             | 10,068  | 8,943   | 13,744  | 705    | 101                                   | 124   | 180   | 90    | 235   |
| West Virginia.....  | 4,320                              | 5,856   | 4,189   | 8,040   | 420    | 122                                   | 117   | 180   | 125   | 260   |
| North Carolina..... | 4,500                              | 3,588   | 2,000   | 6,320   | 593    | 114                                   | 130   | 187   | 105   | 250   |
| South Carolina..... | 1,635                              | 1,407   | 216     | 440     | 293    | 155                                   | 205   | 280   | 184   | 230   |
| Georgia.....        | 1,713                              | 1,713   | 417     | 1,270   | 698    | 120                                   | 165   | 245   | 165   | 200   |
| Ohio.....           | 5,760                              | 7,005   | 2,976   | 13,960  | 3,390  | 150                                   | 153   | 262   | 115   | 225   |
| Indiana.....        | 4,836                              | 1,794   | 4,596   | 1,029   | 1,029  | 121                                   | 180   | 267   | 143   | 230   |
| Illinois.....       | 7,518                              | 3,459   | 1,673   | 5,886   | 2,381  | 110                                   | 185   | 230   | 140   | 250   |
| Michigan.....       | 4,146                              | 9,792   | 5,844   | 16,500  | 6,317  | 140                                   | 115   | 220   | 77    | 195   |
| Wisconsin.....      | 3,090                              | 2,811   | 1,545   | 2,250   | 1,050  | 134                                   | 155   | 220   | 170   | 242   |
| Minnesota.....      | 1,448                              | 996     | 1,336   | 1,350   | 900    | 155                                   | 209   | 250   | 200   | 260   |
| Iowa.....           | 3,795                              | 1,584   | 1,810   | 4,410   | 630    | 145                                   | 206   | 275   | 191   | 274   |
| Missouri.....       | 8,070                              | 4,245   | 5,132   | 4,724   | 480    | 106                                   | 164   | 190   | 170   | 255   |
| South Dakota.....   | 336                                | 273     | 168     | 180     | 126    | 170                                   | 235   | 300   | 260   | 280   |
| Nebraska.....       | 1,854                              | 525     | 907     | 797     | 125    | 140                                   | 230   | 250   | 230   | 270   |
| Kansas.....         | 2,853                              | 1,503   | 1,835   | 1,144   | 172    | 135                                   | 190   | 210   | 220   | 250   |
| Kentucky.....       | 5,802                              | 2,799   | 1,281   | 5,022   | 636    | 117                                   | 170   | 250   | 160   | 250   |
| Tennessee.....      | 4,170                              | 4,050   | 1,259   | 4,280   | 754    | 122                                   | 156   | 225   | 142   | 245   |
| Alabama.....        | 1,449                              | 1,662   | 577     | 1,186   | 890    | 140                                   | 170   | 250   | 175   | 200   |
| Mississippi.....    | .....                              | .....   | 218     | 190     | 145    | .....                                 | ..... | 235   | 190   | 240   |
| Louisiana.....      | .....                              | .....   | 44      | 34      | 35     | .....                                 | ..... | 200   | 200   | 200   |
| Texas.....          | 357                                | 273     | 487     | 274     | 274    | 156                                   | 180   | 190   | 200   | 190   |
| Oklahoma.....       | 1,283                              | 660     | 1,600   | 585     | 486    | 130                                   | 201   | 175   | 230   | 210   |
| Arkansas.....       | 2,574                              | 1,290   | 7,164   | 3,900   | 120    | 135                                   | 140   | 170   | 140   | 200   |
| Montana.....        | 1,044                              | 792     | 850     | 825     | 973    | 100                                   | 210   | 175   | 180   | 150   |
| Wyoming.....        | .....                              | .....   | 30      | 18      | 19     | .....                                 | ..... | 350   | ..... | 250   |
| Colorado.....       | 2,190                              | 2,007   | 3,418   | 2,830   | 3,200  | 80                                    | 170   | 185   | 140   | 170   |
| New Mexico.....     | 879                                | 912     | 1,100   | 434     | 483    | 150                                   | 118   | 200   | 180   | 200   |
| Arizona.....        | 129                                | 138     | 125     | 80      | 47     | 205                                   | 240   | 225   | 250   | 250   |
| Utah.....           | 906                                | 786     | 760     | 1,064   | 1,037  | 80                                    | 140   | 170   | 120   | 130   |
| Nevada.....         | .....                              | .....   | 53      | 36      | 24     | .....                                 | ..... | 300   | 275   | 260   |
| Idaho.....          | 3,843                              | 1,200   | 3,800   | 3,420   | 4,400  | 95                                    | 170   | 180   | 145   | 180   |
| Washington.....     | 19,830                             | 16,491  | 25,295  | 21,502  | 29,062 | 125                                   | 125   | 155   | 140   | 125   |
| Oregon.....         | 4,335                              | 3,384   | 6,921   | 4,158   | 6,667  | 105                                   | 110   | 140   | 125   | 115   |
| California.....     | 6,804                              | 6,560   | 8,200   | 6,000   | 6,500  | 115                                   | 130   | 145   | 160   | 135   |
| United States.....  | 166,749                            | 169,625 | 142,086 | 223,677 | 98,097 | 121.7                                 | 132.8 | 183.6 | 114.8 | 167.8 |

## APPLES—Continued.

TABLE 196.—*Apples: Estimated annual production of the commercial apple crop in the United States for the years 1917 to 1921, inclusive.*

[By commercial crop is meant that portion of the total crop which is sold for consumption as fresh fruit. One barrel is equivalent to three boxes.]

| State.     | Thousands of barrels. |       |       |       |       | State.     | Thousands of barrels. |        |        |        |        |
|------------|-----------------------|-------|-------|-------|-------|------------|-----------------------|--------|--------|--------|--------|
|            | 1917                  | 1918  | 1919  | 1920  | 1921  |            | 1917                  | 1918   | 1919   | 1920   | 1921   |
| Me.....    | 400                   | 226   | 675   | 230   | 630   | Mo.....    | 1,128                 | 735    | 1,010  | 924    | 30     |
| N. H.....  | 120                   | 122   | 187   | 170   | 110   | S. Dak.... | 4                     | 3      | 3      | 5      | 0      |
| Vt.....    | 132                   | 105   | 203   | 190   | 116   | Nebr.....  | 226                   | 72     | 180    | 110    | 17     |
| Mass.....  | 225                   | 330   | 335   | 375   | 172   | Kans.....  | 650                   | 338    | 459    | 286    | 29     |
| R. I.....  | 19                    | 20    | 65    | 75    | 8     | Ky.....    | 153                   | 108    | 57     | 218    | 31     |
| Conn.....  | 96                    | 103   | 119   | 215   | 70    | Tenn.....  | 192                   | 218    | 68     | 204    | 45     |
| N. Y.....  | 2,058                 | 5,950 | 2,975 | 6,500 | 3,000 | Ala.....   | 24                    | 26     | 9      | 20     | 15     |
| N. J.....  | 408                   | 514   | 456   | 848   | 132   | Tex.....   | 23                    | 11     | 37     | 21     | 21     |
| Pa.....    | 854                   | 1,116 | 759   | 1,547 | 221   | Okla.....  | 54                    | 17     | 43     | 29     | 21     |
| Del.....   | 191                   | 136   | 155   | 219   | 14    | Ark.....   | 409                   | 241    | 1,100  | 724    | 16     |
| Md.....    | 263                   | 315   | 177   | 399   | 20    | Mont.....  | 74                    | 75     | 140    | 128    | 175    |
| Va.....    | 1,687                 | 1,786 | 1,653 | 1,988 | 136   | Colo.....  | 701                   | 527    | 828    | 736    | 812    |
| W. Va..... | 688                   | 1,032 | 648   | 1,340 | 130   | N. Mex.... | 175                   | 117    | 264    | 108    | 123    |
| N. C.....  | 200                   | 184   | 92    | 250   | 25    | Ariz.....  | 16                    | 15     | 15     | 10     | 6      |
| Ga.....    | 120                   | 117   | 35    | 106   | 58    | Utah.....  | 184                   | 163    | 121    | 196    | 193    |
| Ohio.....  | 503                   | 902   | 280   | 1,445 | 360   | Idaho..... | 873                   | 112    | 1,008  | 756    | 1,349  |
| Ind.....   | 456                   | 266   | 137   | 542   | 109   | Wash.....  | 4,620                 | 4,296  | 7,167  | 5,734  | 8,300  |
| Ill.....   | 1,554                 | 837   | 712   | 1,369 | 397   | Oreg.....  | 713                   | 671    | 1,357  | 832    | 1,667  |
| Mich.....  | 515                   | 1,495 | 1,050 | 3,167 | 1,208 | Calif..... | 1,174                 | 1,127  | 1,200  | 1,230  | 1,280  |
| Wis.....   | 124                   | 114   | 108   | 161   | 64    | U. S.....  | 22,341                | 24,743 | 26,159 | 33,905 | 21,204 |
| Minn.....  | 60                    | 40    | 61    | 78    | 64    |            |                       |        |        |        |        |
| Iowa.....  | 275                   | 101   | 211   | 420   | 25    |            |                       |        |        |        |        |

TABLE 197.—*Apples: Total aggregate production (bushels) in the United States, 1889–1921.*

| Year.                   | Production. | Year.                   | Production. | Year.                   | Production. | Year.     | Production. |
|-------------------------|-------------|-------------------------|-------------|-------------------------|-------------|-----------|-------------|
| 1889 <sup>1</sup> ..... | 143,105,000 | 1898.....               | 118,061,000 | 1906.....               | 216,720,000 | 1914..... | 253,200,000 |
| 1890.....               | 80,142,000  | 1899 <sup>1</sup> ..... | 175,397,000 | 1907.....               | 119,560,000 | 1915..... | 230,011,000 |
| 1891.....               | 196,907,000 | 1900.....               | 205,930,000 | 1908.....               | 148,940,000 | 1916..... | 198,905,000 |
| 1892.....               | 120,536,000 | 1901.....               | 135,500,000 | 1909 <sup>1</sup> ..... | 146,182,000 | 1917..... | 166,749,000 |
| 1893.....               | 114,773,000 | 1902.....               | 212,330,000 | 1910.....               | 141,640,000 | 1918..... | 169,625,000 |
| 1894.....               | 131,648,000 | 1903.....               | 195,680,000 | 1911.....               | 214,020,000 | 1919..... | 142,086,000 |
| 1895.....               | 219,600,000 | 1904.....               | 233,680,000 | 1912.....               | 235,220,000 | 1920..... | 223,677,000 |
| 1896.....               | 232,600,000 | 1905.....               | 136,220,000 | 1913.....               | 145,410,000 | 1921..... | 98,097,000  |
| 1897.....               | 163,728,000 |                         |             |                         |             |           |             |

<sup>1</sup> Census figures.

## APPLES—Continued.

TABLE 198.—Apples: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.        | June.           | July.           | August.         | September.      | October.        | November production estimate. | Final estimate.     |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------------|---------------------|
|              | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>               | <i>Bushels.</i>     |
| 1915.....    | 191,260         | 193,552         | 205,333         | 213,597         | 214,896         | 230,011                       | 230,011             |
| 1916.....    | 216,726         | 217,593         | 214,572         | 203,037         | 195,507         | 202,245                       | 198,905             |
| 1917.....    | 205,251         | 200,341         | 187,743         | 177,157         | 176,620         | 177,733                       | 166,749             |
| 1918.....    | 203,164         | 195,419         | 198,514         | 185,328         | 198,389         | 197,380                       | 169,625             |
| 1919.....    | 166,334         | 155,608         | 155,004         | 153,242         | 156,721         | 144,429                       | 142,088             |
| 1920.....    | 198,968         | 200,421         | 213,157         | 223,241         | 227,973         | 206,219                       | 223,677             |
| Average..... | 197,450         | 193,872         | 195,726         | 194,350         | 195,518         | 193,000                       | 187,676             |
| 1921.....    | 109,674         | 102,190         | 109,453         | 106,928         | 109,910         | 109,710                       | <sup>1</sup> 98,097 |

<sup>1</sup> Preliminary.

TABLE 199.—Apples: Farm price, cents per bushel, on 1st of each month, 1910–1921.

| Year.              | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. | Yearly aver. |
|--------------------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|--------------|
| 1910.....          | 108.8   | 112.6   | 114.2   | 120.7   | 119.6  | 94.4    | 75.4    | 73.7    | 75.5     | 83.4    | 89.6    | 97.1    | 97.1         |
| 1911.....          | 108.0   | 117.2   | 121.6   | 131.8   | 139.2  | 137.5   | 115.1   | 83.9    | 71.6     | 68.0    | 69.4    | 72.1    | 103.0        |
| 1912.....          | 89.4    | 95.8    | 101.2   | 109.2   | 121.8  | 118.4   | 95.2    | 75.0    | 64.8     | 61.8    | 62.4    | 66.3    | 88.4         |
| 1913.....          | 73.4    | 76.4    | 80.4    | 83.7    | 89.5   | 97.6    | 93.6    | 80.6    | 75.8     | 81.0    | 90.0    | 98.1    | 85.0         |
| 1914.....          | 107.1   | 116.8   | 128.0   | 133.0   | 141.8  | 141.0   | 113.4   | 79.9    | 65.1     | 58.8    | 56.6    | 59.4    | 99.9         |
| 1915.....          | 68.0    | 71.2    | 73.2    | 76.8    | 85.4   | 90.4    | 84.4    | 70.1    | 59.9     | 62.0    | 69.2    | 69.0    | 73.3         |
| 1916.....          | 79.7    | 88.0    | 92.0    | 94.9    | 98.0   | 105.4   | 108.1   | 80.4    | 77.7     | 83.1    | 87.6    | 91.2    | 90.5         |
| 1917.....          | 101.1   | 110.0   | 128.3   | 133.0   | 149.3  | 157.2   | 151.1   | 127.0   | 107.8    | 106.8   | 117.5   | 121.6   | 125.5        |
| 1918.....          | 128.8   | 140.1   | 145.3   | 151.9   | 154.8  | 158.2   | 150.4   | 128.1   | 123.7    | 133.5   | 138.6   | 132.8   | 140.5        |
| 1919.....          | 147.7   | 160.4   | 175.4   | 201.6   | 224.5  | 237.3   | 197.7   | 174.7   | 162.0    | 171.1   | 182.8   | 183.6   | 184.9        |
| 1920.....          | 213.8   | 214.7   | 231.8   | 280.1   | 285.5  | 297.0   | 280.7   | 198.4   | 137.4    | 132.8   | 130.0   | 114.8   | 203.1        |
| 1921.....          | 118.6   | 128.4   | 130.5   | 134.4   | 142.2  | 169.2   | 170.0   | 171.2   | 163.6    | 186.9   | 213.9   | 168.5   | 158.1        |
| Average, 1912–1921 | 112.8   | 120.2   | 127.9   | 137.9   | 149.3  | 157.2   | 144.5   | 118.5   | 103.8    | 107.8   | 114.9   | 110.5   | 125.4        |

TABLE 200.—Apples: Extent and causes of yearly crop losses, 1912–1920.

| Year.        | Deficient moisture. | Excessive moisture. | Floods.          | Frost and freeze. | Hail.         | Hot winds.    | Storms.       | Total climatic. | Plant disease. | Insect pests. | Animal pests.    | Total.        |
|--------------|---------------------|---------------------|------------------|-------------------|---------------|---------------|---------------|-----------------|----------------|---------------|------------------|---------------|
|              | <i>P. ct.</i>       | <i>P. ct.</i>       | <i>P. ct.</i>    | <i>P. ct.</i>     | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i>   | <i>P. ct.</i>  | <i>P. ct.</i> | <i>P. ct.</i>    | <i>P. ct.</i> |
| 1920.....    | 2.2                 | 0.8                 | 0.2              | 10.2              | 0.8           | 0.2           | 0.7           | 16.6            | 4.4            | 1.9           | 0.1              | 25.9          |
| 1919.....    | 4.3                 | 2.9                 | .1               | 29.1              | .6            | .6            | 1.0           | 39.1            | 5.1            | 2.7           | .1               | 52.7          |
| 1918.....    | 7.5                 | .7                  | .3               | 19.1              | .8            | 1.0           | .7            | 30.7            | 4.2            | 2.9           | .2               | 44.9          |
| 1917.....    | 4.1                 | 3.6                 | .1               | 15.3              | 1.1           | .3            | 1.1           | 27.0            | 4.7            | 2.8           | .1               | 44.2          |
| 1916.....    | 5.4                 | 3.2                 | .3               | 9.9               | .9            | .6            | 1.4           | 22.8            | 5.6            | 3.0           | .1               | 38.6          |
| 1915.....    | 1.2                 | 1.9                 | .2               | 15.8              | .9            | .1            | 1.2           | 21.8            | 5.2            | 3.0           | .1               | 35.4          |
| 1914.....    | 6.5                 | .3                  | ( <sup>1</sup> ) | 6.4               | .6            | .4            | .6            | 15.1            | .8             | 5.0           | .1               | 28.2          |
| 1913.....    | 10.3                | .4                  | .4               | 25.3              | .6            | .9            | .6            | 39.9            | 1.0            | 5.2           | ( <sup>1</sup> ) | 53.5          |
| 1912.....    | 2.5                 | .9                  | .3               | 10.3              | .7            | .3            | .9            | 16.9            | 4.2            | 3.1           | .1               | 32.4          |
| Average..... | 4.9                 | 1.7                 | .2               | 15.7              | .8            | .5            | .9            | 25.6            | 3.9            | 3.3           | .1               | 39.5          |

<sup>1</sup> Less than 0.05 per cent.



## APPLES—Continued.

TABLE 201.—Apples: Monthly average jobbing prices per barrel and per box at 10 markets, 1921.

## BARRELS.

| Market.                       | January average. | February average. | March average. | April.         |          | May.           |          |
|-------------------------------|------------------|-------------------|----------------|----------------|----------|----------------|----------|
|                               |                  |                   |                | Range.         | Average. | Range.         | Average. |
| New York.....                 | \$4.80           | \$5.01            | \$3.01         | \$3.50-\$10.00 | \$3.79   | \$4.00-\$13.50 | \$3.03   |
| Chicago.....                  | 5.36             | 5.15              | 5.33           | 4.50- 8.00     | 5.55     | 5.00- 9.00     | 6.53     |
| Philadelphia.....             | 4.05             | 4.17              | 4.44           | 2.85- 7.00     | 5.07     | 4.00- 7.50     | 6.00     |
| Pittsburgh.....               | 4.59             | 4.73              | 5.06           | 3.25- 6.50     | 5.34     | 4.50- 8.50     | 6.31     |
| St. Louis.....                | 4.68             | 4.88              | 5.23           | 4.75- 8.50     | 5.92     | 5.50-10.00     | 6.68     |
| Cincinnati.....               | 4.46             | 4.65              | 5.31           | 4.25- 8.00     | 6.02     | 5.00- 7.75     | 6.70     |
| St. Paul.....                 | 5.31             | 5.69              | 5.87           | 4.75- 7.50     | 6.39     | .....          | .....    |
| Minneapolis.....              | 6.13             | 6.17              | 6.14           | 6.00- 7.50     | 6.73     | 7.00- 8.25     | 7.51     |
| Kansas City.....              | 5.58             | 5.97              | 5.73           | 5.75- 7.00     | 5.91     | 5.75- 6.00     | 5.88     |
| Washington <sup>1</sup> ..... | 4.68             | 4.71              | 5.19           | 3.50- 7.50     | 5.56     | 4.00-10.00     | 6.61     |

| Market.                       | September.     |          | October.       |          | November average. | December average. |
|-------------------------------|----------------|----------|----------------|----------|-------------------|-------------------|
|                               | Range.         | Average. | Range.         | Average. |                   |                   |
| New York.....                 | \$5.50-\$13.00 | \$8.09   | \$5.00-\$11.00 | \$7.72   | \$7.18            | \$7.82            |
| Chicago.....                  | 7.00- 10.00    | 8.26     | 6.00-10.50     | 8.00     | 7.97              | 8.10              |
| Philadelphia.....             | 4.50-10.50     | 7.44     | 4.00-12.00     | 6.63     | 6.57              | 6.65              |
| Pittsburgh.....               | 5.25- 9.00     | 7.22     | 5.00- 9.00     | 7.16     | 6.55              | 6.25              |
| St. Louis.....                | .....          | .....    | 4.85- 8.25     | 6.43     | 5.44              | .....             |
| Cincinnati.....               | 7.00- 9.00     | 8.12     | 5.00- 8.50     | 7.64     | 6.98              | 6.72              |
| St. Paul.....                 | .....          | .....    | 7.00- 8.50     | 7.37     | 7.73              | 7.97              |
| Minneapolis.....              | .....          | .....    | 7.50-10.00     | 8.78     | 9.77              | 8.39              |
| Kansas City.....              | 10.00-12.00    | 11.00    | .....          | .....    | .....             | .....             |
| Washington <sup>1</sup> ..... | 5.00-11.00     | 8.88     | 7.50-11.00     | 9.23     | 8.42              | 8.12              |

## BOXES.

| Market.           | January average. | February average. | March average. | April.        |          | May.          |          |
|-------------------|------------------|-------------------|----------------|---------------|----------|---------------|----------|
|                   |                  |                   |                | Range.        | Average. | Range.        | Average. |
| New York.....     | \$3.70           | \$3.90            | \$3.77         | \$2.50-\$6.00 | \$3.98   | \$2.75-\$5.00 | \$3.87   |
| Chicago.....      | 3.14             | 3.30              | 3.62           | 2.25- 5.25    | 3.23     | 2.50- 4.50    | 3.23     |
| Philadelphia..... | 3.44             | 3.83              | 3.06           | .....         | .....    | 2.00- 4.00    | 3.11     |
| Pittsburgh.....   | 2.60             | .....             | 3.11           | 2.25- 3.75    | 3.04     | 2.25- 4.00    | 3.18     |
| Cincinnati.....   | 2.40             | .....             | .....          | .....         | .....    | .....         | .....    |
| St. Paul.....     | 3.09             | 3.54              | 3.28           | 3.00- 3.75    | 3.29     | 3.00- 3.50    | 3.27     |
| Minneapolis.....  | 3.18             | 3.45              | 3.41           | 3.00- 3.75    | 3.38     | 3.00- 3.75    | 3.38     |
| Kansas City.....  | 2.84             | 3.29              | 3.53           | 3.50- 4.50    | 4.00     | 3.50- 4.50    | 4.00     |

| Market.                       | September.    |          | October.      |          | November average. | December average. |
|-------------------------------|---------------|----------|---------------|----------|-------------------|-------------------|
|                               | Range.        | Average. | Range.        | Average. |                   |                   |
| New York.....                 | \$2.25-\$6.00 | \$4.06   | \$2.00-\$5.50 | \$3.38   | \$2.80            | \$3.12            |
| Chicago.....                  | .....         | .....    | 2.00- 4.75    | 3.43     | 3.05              | 3.00              |
| Philadelphia.....             | .....         | .....    | 1.32- 5.00    | 2.88     | 2.41              | 2.49              |
| Pittsburgh.....               | .....         | .....    | 2.00- 4.75    | 3.22     | 2.85              | .....             |
| St. Paul.....                 | 2.25- 3.75    | 2.81     | 3.00- 4.25    | 3.62     | 3.56              | 3.62              |
| Minneapolis.....              | 2.25- 4.75    | 3.22     | 2.90- 4.75    | 3.75     | 3.57              | 3.77              |
| Kansas City.....              | 3.75- 4.75    | 3.75     | 2.75- 4.50    | 3.54     | 3.63              | 3.62              |
| Washington <sup>1</sup> ..... | .....         | .....    | 2.25- 5.00    | 3.75     | 3.64              | 3.38              |

<sup>1</sup> Sales direct to retailers.<sup>2</sup> Bulk per barrel measure.

## APPLES—Continued.

TABLE 202.—Apples: Carlot shipments, by States of origin, 1917–1921.

| State.                   | 1917             | 1918             | 1919             | 1920             | 1921             | State.                                 | 1917             | 1918             | 1919             | 1920             | 1921             |
|--------------------------|------------------|------------------|------------------|------------------|------------------|--|------------------|------------------|------------------|------------------|------------------|
| Maine.....               | 1,264            | 319              | 2,300            | 415              | 3,994            | Missouri.....                          | 2,370            | 1,327            | 2,015            | 1,682            | 301              |
| New Hamp-<br>shire.....  | 263              | ( <sup>1</sup> ) | 515              | 249              | 306              | Nebraska.....                          | 659              | ( <sup>1</sup> ) | 164              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Vermont.....             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 189              | 135              | 159              | Kansas.....                            | 1,132            | 393              | 534              | 738              | ( <sup>1</sup> ) |
| Massachusetts            | 245              | 235              | 407              | 583              | 229              | Tennessee.....                         | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 136              | .....            |
| New York.....            | 7,496            | 19,293           | 12,496           | 27,657           | 22,031           | Arkansas.....                          | 1,412            | 1,175            | 4,368            | 2,676            | 199              |
| New Jersey...            | 1,029            | 936              | 743              | 812              | 219              | Montana.....                           | 171              | ( <sup>1</sup> ) | 498              | 425              | 676              |
| Pennsylvania             | 781              | 1,659            | 1,349            | 2,393            | 916              | Colorado.....                          | 2,088            | 2,041            | 3,203            | 2,737            | 3,661            |
| Delaware.....            | 349              | 375              | 495              | 754              | ( <sup>1</sup> ) | New Mexico...                          | 634              | 404              | 965              | ( <sup>1</sup> ) | 622              |
| Maryland.....            | 410              | 690              | 602              | 1,533            | 283              | Utah.....                              | 243              | 452              | 194              | 610              | 744              |
| Virginia.....            | 3,808            | 4,315            | 6,619            | 8,043            | 2,087            | Idaho.....                             | 2,988            | 1,100            | 3,324            | 2,881            | 5,911            |
| West Virginia            | 1,063            | 2,939            | 2,672            | 4,558            | 1,303            | Washington...                          | 14,477           | 13,075           | 22,140           | 22,603           | 32,673           |
| North Caro-<br>lina..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 151              | 566              | ( <sup>1</sup> ) | Oregon.....                            | 3,235            | 2,336            | 4,167            | 4,156            | 6,120            |
| Georgia.....             | 262              | 133              | ( <sup>1</sup> ) | 157              | 137              | California...                          | 1,555            | 3,053            | 4,147            | 4,666            | 5,040            |
| Ohio.....                | 267              | 463              | 298              | 882              | 695              | Potomac Val-<br>ley <sup>2</sup> ..... | 776              | .....            | .....            | ( <sup>1</sup> ) | .....            |
| Indiana.....             | 230              | 166              | ( <sup>1</sup> ) | 257              | 162              | All other.....                         | 415              | 1,051            | 474              | 629              | 496              |
| Illinois.....            | 5,529            | 2,481            | 2,380            | 3,571            | 625              | Total...                               | 57,043           | 63,840           | 81,552           | 102,982          | 95,837           |
| Michigan.....            | 1,366            | 2,869            | 3,443            | 5,978            | 6,188            |  |                  |                  |                  |                  |                  |
| Iowa.....                | 338              | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |  |                  |                  |                  |                  |                  |

<sup>1</sup> Included in all other.<sup>2</sup> "Potomac Valley" includes Maryland, Pennsylvania, Virginia, and West Virginia, January to June, inclusive.

TABLE 203.—Cold-storage holdings of apples, combined in terms of thousands of barrels (i. e., 000 omitted).

| Year.     | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec. |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1915..... | 4,293 | 3,585 | 2,491 | 1,343 | 474   | 108   | ..... | ..... | ..... | 3,689 | 5,441 |      |
| 1916..... | 4,813 | 4,236 | 3,242 | 1,984 | 1,035 | 304   | ..... | ..... | ..... | 3,260 | 4,492 |      |
| 1917..... | 4,132 | 3,385 | 2,442 | 1,645 | 808   | 265   | ..... | ..... | ..... | 3,296 | 4,689 |      |
| 1918..... | 4,599 | 3,957 | 2,830 | 1,783 | 678   | 159   | ..... | ..... | ..... | 3,752 | 5,928 |      |
| 1919..... | 4,294 | 3,105 | 1,772 | 956   | 380   | 125   | ..... | ..... | 971   | 4,523 | 5,923 |      |
| 1920..... | 5,529 | 4,524 | 3,162 | 1,690 | 806   | 213   | ..... | ..... | 544   | 4,475 | 6,787 |      |
| 1921..... | 6,386 | 5,105 | 3,650 | 2,210 | 1,119 | 445   | ..... | ..... | 792   | 3,643 | 5,739 |      |

## PEACHES.

TABLE 204.—*Peaches: Production and farm prices, by States, 1917-1921.*

| State.              | Total crop (thousands of bushels). |        |        |        |        | Farm price per bushel Sept. 15 (cents). |       |       |       |       |
|---------------------|------------------------------------|--------|--------|--------|--------|---|-------|-------|-------|-------|
|                     | 1917                               | 1918   | 1919   | 1920   | 1921   | 1917                                    | 1918  | 1919  | 1920  | 1921  |
| New Hampshire.....  | 46                                 | 0      | 39     | 0      | 29     | 185                                     | ..... | 210   | 400   | 317   |
| Massachusetts.....  | 144                                | 0      | 213    | 4      | 185    | 200                                     | ..... | 220   | 400   | 357   |
| Rhode Island.....   | .....                              | .....  | 29     | 3      | 12     | .....                                   | ..... | 350   | 415   | 357   |
| Connecticut.....    | 390                                | 0      | 195    | 10     | 290    | 170                                     | ..... | 250   | 425   | 371   |
| New York.....       | 4,823                              | 700    | 1,262  | 2,600  | 1,700  | 140                                     | 310   | 270   | 225   | 255   |
| New Jersey.....     | 990                                | 832    | 1,653  | 2,134  | 347    | 170                                     | 280   | 270   | 220   | 335   |
| Pennsylvania.....   | 1,348                              | 720    | 1,100  | 2,000  | 350    | 170                                     | 275   | 300   | 250   | 345   |
| Delaware.....       | 324                                | 136    | 227    | 203    | 7      | 125                                     | 240   | 190   | 225   | 300   |
| Maryland.....       | 1,038                              | 235    | 564    | 692    | 59     | 120                                     | 240   | 190   | 210   | 300   |
| Virginia.....       | 928                                | 510    | 682    | 1,092  | 52     | 160                                     | 180   | 200   | 185   | 300   |
| West Virginia.....  | 900                                | 680    | 760    | 992    | 48     | 175                                     | 180   | 220   | 225   | 300   |
| North Carolina..... | 1,978                              | 1,150  | 575    | 1,539  | 644    | 125                                     | 160   | 210   | 184   | 285   |
| South Carolina..... | 1,030                              | 998    | 390    | 832    | 566    | 120                                     | 167   | 220   | 200   | 145   |
| Georgia.....        | 3,665                              | 6,092  | 5,895  | 3,799  | 6,550  | 160                                     | 150   | 250   | 171   | 160   |
| Florida.....        | .....                              | .....  | 148    | 150    | 130    | .....                                   | ..... | 250   | 300   | 210   |
| Ohio.....           | 341                                | 174    | 618    | 3,238  | 335    | 215                                     | 300   | 330   | 215   | 365   |
| Indiana.....        | 518                                | 0      | 82     | 405    | 26     | 210                                     | 340   | 330   | 258   | 352   |
| Illinois.....       | 461                                | 0      | 450    | 770    | 78     | 195                                     | 350   | 270   | 317   | 371   |
| Michigan.....       | 744                                | 85     | 448    | 1,500  | 838    | 200                                     | 350   | 310   | 230   | 290   |
| Iowa.....           | .....                              | 0      | 2      | 100    | 85     | 220                                     | 330   | 330   | 347   | 341   |
| Missouri.....       | 728                                | 0      | 1,263  | 1,427  | 0      | 135                                     | 330   | 200   | 254   | ..... |
| Nebraska.....       | .....                              | 0      | 0      | 5      | 0      | 235                                     | 330   | 310   | 403   | ..... |
| Kansas.....         | .....                              | 0      | 214    | 187    | 24     | 195                                     | 350   | 260   | 400   | 320   |
| Kentucky.....       | 1,100                              | 110    | 460    | 988    | 80     | 150                                     | 275   | 240   | 225   | 300   |
| Tennessee.....      | 595                                | 833    | 1,285  | 1,500  | 320    | 120                                     | 170   | 180   | 180   | 230   |
| Alabama.....        | 1,281                              | 2,440  | 1,083  | 974    | 1,230  | 145                                     | 110   | 170   | 175   | 185   |
| Mississippi.....    | .....                              | .....  | 776    | 412    | 322    | 120                                     | 150   | 150   | 175   | 180   |
| Louisiana.....      | .....                              | .....  | 382    | 269    | 264    | .....                                   | ..... | 190   | 275   | 250   |
| Texas.....          | 1,728                              | 2,333  | 4,621  | 800    | 2,200  | 170                                     | 175   | 180   | 310   | 165   |
| Oklahoma.....       | 798                                | 167    | 2,924  | 180    | 360    | 135                                     | 190   | 140   | 250   | 150   |
| Arkansas.....       | 1,624                              | 217    | 3,340  | 117    | 435    | 125                                     | 190   | 160   | 235   | 160   |
| Colorado.....       | 1,096                              | 959    | 722    | 670    | 860    | 200                                     | 200   | 250   | 250   | 175   |
| New Mexico.....     | 124                                | 34     | 204    | 6      | 8      | 195                                     | 235   | 200   | 250   | 325   |
| Arizona.....        | .....                              | .....  | 140    | 48     | 54     | .....                                   | ..... | 180   | 350   | 300   |
| Utah.....           | 1,365                              | 1,050  | 884    | 471    | 763    | 130                                     | 150   | 160   | 250   | 171   |
| Nevada.....         | .....                              | .....  | 6      | 6      | 4      | .....                                   | ..... | 270   | 300   | 280   |
| Idaho.....          | 211                                | 51     | 293    | 42     | 150    | 120                                     | 190   | 180   | 290   | 175   |
| Washington.....     | 1,747                              | 575    | 1,545  | 155    | 772    | 100                                     | 180   | 170   | 280   | 182   |
| Oregon.....         | 273                                | 93     | 504    | 100    | 190    | 110                                     | 200   | 140   | 330   | 250   |
| California.....     | 15,724                             | 11,920 | 17,200 | 15,200 | 12,848 | 100                                     | 140   | 150   | 190   | 100   |
| United States.....  | 48,765                             | 33,094 | 53,178 | 45,620 | 32,733 | .....                                   | ..... | ..... | ..... | ..... |

TABLE 205.—*Peaches: Total production (bushels) in the United States, 1899-1921.*

| Year.                   | Production. | Year.                   | Production. | Year.     | Production. |
|-------------------------|-------------|-------------------------|-------------|-----------|-------------|
| 1899 <sup>1</sup> ..... | 15,432,000  | 1907.....               | 22,527,000  | 1915..... | 64,097,000  |
| 1900.....               | 49,438,000  | 1908.....               | 48,145,000  | 1916..... | 37,505,000  |
| 1901.....               | 46,445,000  | 1909 <sup>1</sup> ..... | 55,470,000  | 1917..... | 48,765,000  |
| 1902.....               | 37,831,000  | 1910.....               | 48,171,000  | 1918..... | 33,084,000  |
| 1903.....               | 28,880,000  | 1911.....               | 34,880,000  | 1919..... | 53,178,000  |
| 1904.....               | 41,070,000  | 1912.....               | 52,343,000  | 1920..... | 45,620,000  |
| 1905.....               | 36,634,000  | 1913.....               | 39,707,000  | 1921..... | 32,733,000  |
| 1906.....               | 44,104,000  | 1914.....               | 54,109,000  |           |             |

<sup>1</sup> Census figures.

PEACHES—Continued.

TABLE 206.—*Peaches: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

| Year.     | June.          | July.          | August.        | September production estimate. | Final estimate. |
|-----------|----------------|----------------|----------------|--------------------------------|-----------------|
|           | <i>Bushel.</i> | <i>Bushel.</i> | <i>Bushel.</i> | <i>Bushel.</i>                 | <i>Bushel.</i>  |
| 1915..... | 59,587         | 57,736         | 59,101         | 64,097                         | 64,097          |
| 1916..... | 42,062         | 42,123         | 40,320         | 36,939                         | 37,505          |
| 1917..... | 45,446         | 45,522         | 42,691         | 39,606                         | 45,765          |
| 1918..... | 62,880         | 40,251         | 40,921         | 39,149                         | 33,094          |
| 1919..... | 50,843         | 50,001         | 49,793         | 51,327                         | 53,173          |
| 1920..... | 45,067         | 45,213         | 45,521         | 44,523                         | 45,520          |
| 1921..... | 30,952         | 30,753         | 31,279         | 33,195                         | 32,733          |

<sup>1</sup> Preliminary.

TABLE 207.—*Peaches: Farm price, cents per bushel, on 15th of each month, 1910-1921.*

| Date.         | 1910  | 1911  | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918  | 1919  | 1920  | 1921  |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| June 15.....  | ..... | 135.0 | 119.2 | ..... | ..... | ..... | 119.6 | 170.2 | 134.0 | 191.1 | 236.8 | 189.3 |
| July 15.....  | ..... | 151.0 | 112.1 | 130.5 | 120.4 | 99.5  | 109.1 | 144.8 | 169.4 | 201.6 | 226.9 | 205.3 |
| Aug. 15.....  | 110.9 | 138.0 | 108.3 | 126.2 | 105.0 | 85.4  | 114.9 | 143.3 | 178.9 | 199.6 | 235.0 | 216.3 |
| Sept. 15..... | 115.1 | 129.0 | 110.0 | 136.3 | 102.2 | 81.1  | 118.3 | 143.8 | 185.3 | 205.7 | 219.8 | 227.5 |
| Oct. 15.....  | 122.8 | 131.0 | 105.0 | 145.0 | 105.3 | 85.2  | 112.1 | 160.6 | 193.2 | 211.7 | 244.2 | 244.3 |

TABLE 208.—*Peaches: Monthly average jobbing prices per 6-basket carrier and bushel at 10 markets, 1921.*

| Market.           | 6-basket carriers. |        |        | Bushels. |        |       | Market.                       | 6-basket carriers. |        |        | Bushels. |        |       |
|-------------------|--------------------|--------|--------|----------|--------|-------|-------------------------------|--------------------|--------|--------|----------|--------|-------|
|                   | June.              | July.  | Aug.   | June.    | July.  | Aug.  |                               | June.              | July.  | Aug.   | June.    | July.  | Aug.  |
| New York.....     | \$3.34             | \$3.04 | \$5.00 | .....    | \$2.62 | ..... | Cincinnati.....               | \$2.27             | \$2.78 | .....  | \$2.42   | \$3.02 | ..... |
| Chicago.....      | 2.47               | 2.95   | 4.23   | \$2.74   | 3.20   | ..... | St. Paul.....                 | .....              | .....  | .....  | .....    | .....  | ..... |
| Philadelphia..... | 2.73               | 2.86   | 4.28   | .....    | 2.07   | ..... | Minneapolis.....              | .....              | .....  | .....  | .....    | .....  | ..... |
| Pittsburgh.....   | 2.59               | 2.87   | 4.29   | .....    | 3.38   | ..... | Kansas City.....              | 2.59               | .....  | .....  | 4.04     | 3.29   | ..... |
| St. Louis.....    | 2.84               | 3.12   | 4.74   | .....    | 3.27   | ..... | Washington <sup>1</sup> ..... | 3.04               | 3.29   | \$4.75 | .....    | .....  | ..... |

<sup>1</sup> Sales direct to retailers.

TABLE 209.—*Peaches: Carlot shipments, by States of origin, for 1917-1921.*

| State.              | 1917             | 1918  | 1919             | 1920  | 1921             | State.          | 1917             | 1918             | 1919   | 1920             | 1921             |
|---------------------|------------------|-------|------------------|-------|------------------|-----------------|------------------|------------------|--------|------------------|------------------|
| Connecticut.....    | 178              | ..... | ( <sup>1</sup> ) | ..... | 73               | Missouri.....   | 163              | .....            | 210    | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| New York.....       | 7,308            | 1,057 | 1,434            | 4,666 | 2,828            | Tennessee.....  | ( <sup>1</sup> ) | 152              | 116    | 149              | 218              |
| New Jersey.....     | 1,218            | 748   | 1,148            | 1,307 | ( <sup>1</sup> ) | Alabama.....    | ( <sup>1</sup> ) | 171              | 199    | 126              | 47               |
| Pennsylvania.....   | 879              | 257   | 366              | 316   | ( <sup>1</sup> ) | Texas.....      | 825              | 1,579            | 1,940  | 62               | 964              |
| Delaware.....       | 235              | 153   | 173              | 171   | .....            | Oklahoma.....   | 278              | 244              | 866    | .....            | ( <sup>1</sup> ) |
| Maryland.....       | 981              | 222   | 617              | 481   | ( <sup>1</sup> ) | Arkansas.....   | 1,597            | 190              | 2,335  | ( <sup>1</sup> ) | 596              |
| Virginia.....       | 125              | 63    | 137              | 370   | .....            | Colorado.....   | 1,347            | 1,111            | 1,334  | 773              | 1,219            |
| West Virginia.....  | 990              | 322   | 425              | 458   | .....            | New Mexico..... | 120              | .....            | 58     | .....            | .....            |
| North Carolina..... | 65               | 56    | 68               | 343   | 510              | Utah.....       | 1,146            | 577              | 1,102  | 402              | 839              |
| South Carolina..... | ( <sup>1</sup> ) | 88    | ( <sup>1</sup> ) | 60    | 31               | Idaho.....      | 197              | 21               | 265    | ( <sup>1</sup> ) | 103              |
| Georgia.....        | 4,098            | 7,995 | 7,236            | 5,663 | 10,636           | Washington..... | 1,920            | 647              | 2,219  | 204              | 1,097            |
| Ohio.....           | 86               | 105   | 56               | 1,035 | 76               | Oregon.....     | 65               | ( <sup>1</sup> ) | 105    | ( <sup>1</sup> ) | 60               |
| Indiana.....        | ( <sup>1</sup> ) | ..... | .....            | 103   | .....            | California..... | 2,858            | 4,518            | 7,846  | 7,354            | 7,463            |
| Illinois.....       | ( <sup>1</sup> ) | 23    | 295              | 540   | ( <sup>1</sup> ) | All other.....  | 113              | 34               | 105    | 109              | 108              |
| Michigan.....       | 445              | 76    | 270              | 2,275 | 198              | Total.....      | 27,237           | 20,409           | 30,923 | 26,967           | 27,006           |

<sup>1</sup> Included in All other.

## PEARS.

TABLE 210.—Pears: Production and farm prices, by States, 1917-1921.

| State.              | Total crop (thousands of bushels). |        |        |        |        | Farm price per bushel Nov. 1.<br>(cents). |       |       |       |       |
|---------------------|------------------------------------|--------|--------|--------|--------|---|-------|-------|-------|-------|
|                     | 1917                               | 1918   | 1919   | 1920   | 1921   | 1917                                      | 1918  | 1919  | 1920  | 1921  |
| Maine.....          | 24                                 | 20     | 14     | 10     | 15     | .....                                     | ..... | 240   | 225   | 200   |
| New Hampshire.....  | 19                                 | 15     | 17     | 18     | 17     | .....                                     | ..... | 240   | 225   | 250   |
| Vermont.....        | 14                                 | 13     | 10     | 10     | 6      | .....                                     | ..... | 240   | 280   | 330   |
| Massachusetts.....  | 71                                 | 77     | 84     | 83     | 45     | .....                                     | ..... | 240   | 250   | 300   |
| Rhode Island.....   | 7                                  | 10     | 11     | 11     | 8      | .....                                     | 175   | 240   | 250   | 150   |
| Connecticut.....    | 29                                 | 24     | 57     | 61     | 50     | .....                                     | 175   | 240   | 250   | 200   |
| New York.....       | 1,703                              | 1,332  | 1,330  | 2,700  | 1,525  | 140                                       | 150   | 240   | 105   | 170   |
| New Jersey.....     | 590                                | 450    | 402    | 690    | 185    | 75  | 110   | 140   | 110   | 150   |
| Pennsylvania.....   | 448                                | 518    | 421    | 845    | 220    | 120                                       | 135   | 230   | 130   | 245   |
| Delaware.....       | 294                                | 238    | 98     | 140    | 9      | 65  | 80    | 150   | 25    | 200   |
| Maryland.....       | 525                                | 455    | 287    | 421    | 35     | 70  | 100   | 130   | 60    | 200   |
| Virginia.....       | 194                                | 119    | 288    | 438    | 30     | 115                                       | 120   | 160   | 95    | 200   |
| West Virginia.....  | 38                                 | 33     | 40     | 66     | 2      | 135                                       | 200   | 230   | 175   | 300   |
| North Carolina..... | 150                                | 108    | 120    | 208    | 100    | 125                                       | 150   | 210   | 161   | 132   |
| South Carolina..... | 100                                | 98     | 99     | 120    | 115    | 125                                       | 140   | 220   | 150   | 150   |
| Georgia.....        | 140                                | 188    | 178    | 173    | 171    | 135                                       | 150   | 180   | 145   | 165   |
| Florida.....        | 46                                 | 132    | 43     | 24     | 40     | 100                                       | ..... | 130   | 150   | 175   |
| Ohio.....           | 334                                | 304    | 157    | 478    | 126    | 125                                       | 170   | 260   | 120   | 275   |
| Indiana.....        | 410                                | 260    | 107    | 375    | 79     | 100                                       | 175   | 180   | 99    | 196   |
| Illinois.....       | 456                                | 302    | 375    | 603    | 100    | 95  | 160   | 170   | 125   | 270   |
| Michigan.....       | 1,080                              | 704    | 405    | 1,044  | 532    | 121                                       | 125   | 180   | 90    | 175   |
| Wisconsin.....      | .....                              | .....  | 20     | 24     | 16     | .....                                     | ..... | 190   | 175   | 320   |
| Iowa.....           | 82                                 | 32     | 30     | 90     | 5      | 145                                       | ..... | 190   | 145   | 600   |
| Missouri.....       | 265                                | 112    | 431    | 418    | 4      | 125                                       | 190   | 140   | 150   | 250   |
| Nebraska.....       | 14                                 | 6      | 120    | 22     | 2      | 175                                       | ..... | 250   | 275   | 300   |
| Kansas.....         | 140                                | 38     | 221    | 41     | 7      | 170                                       | 200   | 170   | 215   | 275   |
| Kentucky.....       | 204                                | 140    | 55     | 132    | 4      | 125                                       | 175   | 180   | 195   | 233   |
| Tennessee.....      | 75                                 | 112    | 115    | 200    | 65     | 170                                       | 150   | 200   | 165   | 205   |
| Alabama.....        | 30                                 | 132    | 163    | 158    | 180    | 150                                       | 130   | 160   | 164   | 137   |
| Mississippi.....    | 30                                 | 136    | 125    | 167    | 167    | 105                                       | 105   | 160   | 200   | 132   |
| Louisiana.....      | 52                                 | 52     | 59     | 47     | 38     | 115                                       | 120   | 125   | 175   | 229   |
| Texas.....          | 280                                | 246    | 637    | 338    | 406    | 160                                       | 150   | 140   | 231   | 190   |
| Oklahoma.....       | 45                                 | 38     | 250    | 42     | 38     | 150                                       | 240   | 190   | 200   | 200   |
| Arkansas.....       | 102                                | 64     | 123    | 42     | 39     | 125                                       | 180   | 170   | 190   | 160   |
| Montana.....        | 11                                 | 6      | 6      | 6      | 7      | .....                                     | ..... | 300   | 200   | 300   |
| Colorado.....       | 320                                | 194    | 345    | 386    | 433    | 210                                       | 150   | 220   | 190   | 220   |
| New Mexico.....     | 46                                 | 56     | 67     | 32     | 24     | .....                                     | ..... | 230   | 250   | 250   |
| Arizona.....        | 21                                 | 19     | 20     | 12     | 16     | .....                                     | 334   | 380   | 250   | 300   |
| Utah.....           | 48                                 | 51     | 76     | 87     | 31     | 120                                       | 160   | 250   | 250   | 250   |
| Nevada.....         | 6                                  | 6      | 4      | 5      | 8      | .....                                     | ..... | 250   | 300   | 250   |
| Idaho.....          | 70                                 | 60     | 49     | 58     | 55     | 150                                       | 150   | 175   | 276   | 200   |
| Washington.....     | 595                                | 1,306  | 1,781  | 1,140  | 1,710  | 115                                       | 115   | 170   | 130   | 170   |
| Oregon.....         | 600                                | 672    | 761    | 760    | 836    | 130                                       | 125   | 150   | 175   | 150   |
| California.....     | 3,523                              | 4,240  | 4,600  | 4,030  | 3,120  | 100                                       | 140   | 180   | 275   | 150   |
| United States.....  | 13,281                             | 13,362 | 15,101 | 16,805 | 10,705 | .....                                     | ..... | ..... | ..... | ..... |

TABLE 211.—Pears: Total production (bushels) in the United States, 1909-1921.

| Year.     | Production. | Year.     | Production. | Year.     | Production. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 1909..... | 8,841,000   | 1914..... | 12,086,000  | 1919..... | 15,101,000  |
| 1910..... | 10,431,000  | 1915..... | 11,216,000  | 1920..... | 14,805,000  |
| 1911..... | 11,450,000  | 1916..... | 11,874,000  | 1921..... | 10,705,000  |
| 1912..... | 11,843,000  | 1917..... | 13,281,000  |           |             |
| 1913..... | 16,106,000  | 1918..... | 13,362,000  |           |             |

PEARS—Continued.

TABLE 212.—Pears: Forecasts of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.     | June.           | July.           | August.         | September.      | October.        | November production estimate. | Final estimate. |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------------------|-----------------|
|           | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>               | <i>Bushels.</i> |
| 1915..... | 11,450          | 10,902          | 11,068          | 11,196          | 11,131          | 11,216                        | 11,216          |
| 1916..... | 11,041          | 10,708          | 10,570          | 10,292          | 10,193          | 10,377                        | 11,874          |
| 1917..... | 12,526          | 11,368          | 10,847          | 10,841          | 10,848          | 11,419                        | 13,281          |
| 1918..... | 10,345          | 10,322          | 10,239          | 10,337          | 10,189          | 10,342                        | 13,362          |
| 1919..... | 12,298          | 12,068          | 12,260          | 13,686          | 13,687          | 13,623                        | 15,101          |
| 1920..... | 13,568          | 13,636          | 14,526          | 14,611          | 14,873          | 15,568                        | 16,805          |
| 1921..... | 8,880           | 9,016           | 9,310           | 9,475           | 9,665           | 9,780                         | 10,705          |

<sup>1</sup> Preliminary.

TABLE 213.—Pears: Farm price, cents per bushel on 15th of month, 1910-1921.

| Date.         | 1910  | 1911  | 1912  | 1913  | 1914 | 1915 | 1916  | 1917  | 1918  | 1919  | 1920  | 1921  |
|---------------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Aug. 15.....  |       | 118.0 | 106.3 | 109.9 | 98.8 | 80.8 | 109.0 | 132.2 | 168.4 | 188.4 | 195.5 | 165.2 |
| Sept. 15..... | 100.9 | 108.8 | 100.0 | 119.3 | 92.8 | 83.8 | 102.7 | 125.0 | 157.8 | 183.0 | 197.9 | 175.1 |
| Oct. 15.....  | 98.6  | 97.2  | 83.1  | 95.6  | 80.4 | 82.7 | 96.9  | 118.2 | 147.5 | 181.3 | 184.2 | 186.4 |
| Nov. 15.....  | 100.8 | 85.1  | 79.3  | 98.0  | 77.5 | 89.8 | 93.3  | 116.1 | 140.1 | 182.0 | 170.0 | 194.9 |
| Dec. 15.....  | 122.4 | 111.0 | 92.8  | 97.9  | 82.5 | 89.7 | 105.6 |       | 156.6 | 219.5 | 164.5 | 198.7 |

TABLE 214.—Pears: Carlot shipments, by States of origin, for 1919-1921.

| State.          | 1919  | 1920  | 1921  | State.          | 1919   | 1920   | 1921   |
|-----------------|-------|-------|-------|-----------------|--------|--------|--------|
| New York.....   | 1,505 | 3,900 | 2,913 | Texas.....      | 100    | 38     | 96     |
| New Jersey..... | 121   | 35    | 27    | Colorado.....   | 524    | 604    | 733    |
| Delaware.....   | 55    | 287   |       | New Mexico..... | (1)    | 35     | 27     |
| Virginia.....   |       | 34    | (1)   | Utah.....       | (1)    | 75     | 31     |
| Georgia.....    | 51    | (1)   | 25    | Washington..... | 2,454  | 1,888  | 2,844  |
| Ohio.....       | (1)   | 54    | (1)   | Oregon.....     | 930    | 847    | 970    |
| Indiana.....    |       | 78    |       | California..... | 3,664  | 4,594  | 4,339  |
| Illinois.....   | 324   | 1,140 |       | All other.....  | 230    | 169    | 107    |
| Michigan.....   | 127   | 1,142 | 610   | Total.....      | 10,158 | 14,950 | 12,772 |
| Missouri.....   | 73    | (1)   | (1)   |                 |        |        |        |

<sup>1</sup> Included in all other.

ORANGES.

TABLE 215.—Oranges: Production and value, 1915-1921.

| Year.     | United States.            |                               |                                  | Florida.                  |                               |                                  | California.               |                               |                                  |
|-----------|---------------------------|-------------------------------|----------------------------------|---------------------------|-------------------------------|----------------------------------|---------------------------|-------------------------------|----------------------------------|
|           | Production (000 omitted). | Average price per box Dec. 1. | Farm value Dec. 1 (000 omitted). | Production (000 omitted). | Average price per box Dec. 1. | Farm value Dec. 1 (000 omitted). | Production (000 omitted). | Average price per box Dec. 1. | Farm value Dec. 1 (000 omitted). |
|           | <i>Boxes.</i>             | <i>Dollars.</i>               | <i>Dollars.</i>                  | <i>Boxes.</i>             | <i>Dollars.</i>               | <i>Dollars.</i>                  | <i>Boxes.</i>             | <i>Dollars.</i>               | <i>Dollars.</i>                  |
| 1915..... | 21,200                    | 2.39                          | 50,692                           | 6,150                     | 1.88                          | 11,562                           | 15,050                    | 2.60                          | 39,130                           |
| 1916..... | 24,433                    | 2.52                          | 61,463                           | 6,933                     | 2.05                          | 14,213                           | 17,500                    | 2.70                          | 47,250                           |
| 1917..... | 10,593                    | 2.60                          | 27,556                           | 3,500                     | 2.80                          | 9,800                            | 7,093                     | 2.75                          | 19,506                           |
| 1918..... | 24,200                    | 3.49                          | 84,480                           | 5,700                     | 2.65                          | 15,105                           | 15,600                    | 3.75                          | 58,375                           |
| 1919..... | 22,523                    | 2.67                          | 60,202                           | 7,000                     | 2.50                          | 17,500                           | 15,525                    | 2.75                          | 42,700                           |
| 1920..... | 29,700                    | 2.19                          | 64,908                           | 8,100                     | 2.20                          | 17,820                           | 21,600                    | 2.18                          | 47,068                           |
| 1921..... | 30,700                    | 2.08                          | 63,860                           | 8,200                     | 1.75                          | 14,350                           | 22,500                    | 2.20                          | 49,500                           |

## CRANBERRIES.

TABLE 216.—Cranberries: Acreage, production, and farm value, by States, 1920 and 1921, and totals, 1914-1921.

[Leading producing States.]

| State and year.    | Acreage. |        | Average yield in barrels per acre. |      | Production (thousands of barrels). |      | Average farm price per barrel Dec. 1. |         | Farm value (thousands of dollars). |       |
|--------------------|----------|--------|------------------------------------|------|------------------------------------|------|---------------------------------------|---------|------------------------------------|-------|
|                    | 1920     | 1921   | 1920                               | 1921 | 1920                               | 1921 | 1920                                  | 1921    | 1920                               | 1921  |
| Massachusetts..... | 13,000   | 13,000 | 21.5                               | 12.7 | 280                                | 165  | \$13.50                               | \$20.00 | 3,780                              | 3,300 |
| New Jersey.....    | 10,000   | 10,000 | 13.3                               | 17.9 | 133                                | 179  | 10.50                                 | 14.00   | 1,395                              | 2,505 |
| Wisconsin.....     | 2,000    | 2,000  | 17.9                               | 14.4 | 36                                 | 29   | 9.40                                  | 13.30   | 338                                | 386   |
| Total.....         | 25,000   | 25,000 | 18.0                               | 14.9 | 449                                | 373  | 12.28                                 | 16.60   | 5,514                              | 6,192 |
| 1919.....          | 25,000   |        | 22.0                               |      | 549                                |      | 8.37                                  |         | 4,597                              |       |
| 1918.....          | 25,400   |        | 13.9                               |      | 352                                |      | 10.77                                 |         | 3,791                              |       |
| 1917.....          | 18,200   |        | 13.7                               |      | 249                                |      | 10.24                                 |         | 2,550                              |       |
| 1916.....          | 26,200   |        | 18.0                               |      | 471                                |      | 7.32                                  |         | 3,449                              |       |
| 1915.....          | 23,100   |        | 19.1                               |      | 441                                |      | 6.59                                  |         | 2,908                              |       |
| 1914.....          | 22,000   |        | 31.7                               |      | 697                                |      | 3.97                                  |         | 2,766                              |       |

TABLE 217.—Cranberries: Forecasts of production, monthly, with preliminary and final estimates.

| Year.     | September. | October. | November production estimate. | Final estimate.      |
|-----------|------------|----------|-------------------------------|----------------------|
|           | Barrels.   | Barrels. | Barrels.                      | Barrels.             |
| 1918..... | 495,000    | 488,000  | 374,000                       | 352,000              |
| 1919..... | 637,000    | 559,000  | 546,000                       | 549,000              |
| 1920..... | 474,000    | 449,000  | 432,000                       | 449,000              |
| 1921..... | 422,000    | 388,000  | 376,000                       | <sup>1</sup> 373,000 |

<sup>1</sup> Preliminary.

## FRUITS AND NUTS.

TABLE 218.—Fruits and nuts: Production and value in California, 1919-1921.

[Estimates of the agricultural statistician for California.]

| Crop.                             | Production in tons. |            |            | Price per ton. |          |          | Total value. |             |             |
|-----------------------------------|---------------------|------------|------------|----------------|----------|----------|--------------|-------------|-------------|
|                                   | 1919                | 1920       | 1921       | 1919           | 1920     | 1921     | 1919         | 1920        | 1921        |
| Almonds.....                      | 7,250               | 5,500      | 5,500      | \$440.00       | \$360.00 | \$320.00 | \$3,190,000  | \$1,980,000 | \$1,760,000 |
| Apricots.....                     | 175,000             | 110,000    | 105,000    | 80.00          | 85.00    | 50.00    | 14,000,000   | 9,350,000   | 5,250,000   |
| Charries.....                     | 12,400              | 17,500     | 13,000     | 150.00         | 200.00   | 125.00   | 1,860,000    | 3,500,000   | 1,625,000   |
| Figs.....                         | 12,000              | 12,300     | 8,000      | 150.00         | 90.00    | 145.00   | 1,800,000    | 1,107,000   | 1,160,000   |
| Grapes, raisin.....               | 182,500             | 177,000    | 180,000    | 210.00         | 235.00   | 190.00   | 38,325,000   | 41,595,000  | 34,700,000  |
| Grapes, wine.....                 | 400,000             | 375,000    | 310,000    | 40.00          | 65.00    | 82.00    | 16,000,000   | 24,375,000  | 25,420,000  |
| Grapes, table.....                | 200,000             | 190,000    | 125,000    | 75.00          | 75.00    | 75.00    | 15,000,000   | 14,250,000  | 9,375,000   |
| Lemons, boxes <sup>1</sup> .....  | 3,499,066           | 4,955,000  |            |                |          | \$2.50   |              |             |             |
| Oranges, boxes <sup>1</sup> ..... | 15,528,278          | 21,725,000 | 22,500,000 | \$2.75         | \$2.75   | \$2.20   | 42,702,764   | 59,743,750  | 49,500,000  |
| Olives.....                       | 8,800               | 8,000      | 8,200      |                | 95.00    | 90.00    |              | 760,000     | 738,000     |
| Peaches.....                      | 42,000              | 35,000     | 40,000     | 60.00          | 90.00    | 53.00    | 2,520,000    | 3,150,000   | 2,120,000   |
| Prunes.....                       | 135,000             | 97,250     | 90,000     | 240.00         | 130.00   | 130.00   | 32,400,000   | 19,450,000  | 11,700,000  |
| Walnuts.....                      | 28,100              | 21,000     | 19,500     | 550.00         | 400.00   | 400.00   | 15,455,000   | 8,400,000   | 7,800,000   |

<sup>1</sup> Representing the commercial crop year beginning Oct. 1; i. e., the numbers for 1921 represent the fruit that set during the season of 1921 and will be picked and marketed between Oct. 1, 1921, and Oct. 1, 1922.<sup>2</sup> Per box.

## HOPS.

TABLE 219.—Hops: Area and production in undermentioned countries, 1909-1920.

| Country.                            | Area.                             |                  |                  |                  | Production.                       |                    |                    |                    |
|-------------------------------------|-----------------------------------|------------------|------------------|------------------|-----------------------------------|--------------------|--------------------|--------------------|
|                                     | Average<br>1909-1913 <sup>1</sup> | 1918             | 1919             | 1920             | Average<br>1909-1913 <sup>1</sup> | 1918               | 1919               | 1920               |
| <b>NORTH AMERICA.</b>               | 1,000<br>acres.                   | 1,000<br>acres.  | 1,000<br>acres.  | 1,000<br>acres.  | 1,000<br>pounds.                  | 1,000<br>pounds.   | 1,000<br>pounds.   | 1,000<br>pounds.   |
| United States <sup>2</sup> .....    | 26                                | 21               | 28               | 53,655           | 21,481                            | 24,970             | 34,280             |                    |
| Canada.....                         | 1                                 |                  |                  | 1,208            |                                   |                    |                    |                    |
| Total North America.....            |                                   |                  |                  | 54,863           |                                   |                    |                    |                    |
| <b>EUROPE.</b>                      |                                   |                  |                  |                  |                                   |                    |                    |                    |
| Austria.....                        | <sup>3</sup> 50                   | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> ) | <sup>5</sup> 27,523               | 139                | <sup>6</sup> 104   | 90                 |
| Croatia Slavonia <sup>3</sup> ..... | 1                                 |                  |                  |                  | 263                               |                    |                    |                    |
| Belgium.....                        | 6                                 |                  | 3                | 4                | 7,096                             |                    | 3,180              | 5,040              |
| Czechoslovakia.....                 |                                   | 22               | <sup>6</sup> 21  | 21               |                                   | 4,549              | <sup>5</sup> 9,590 | 11,610             |
| France.....                         | <sup>3</sup> 7                    | <sup>3</sup> 3   | 4                | 10               | <sup>5</sup> 6,948                | <sup>5</sup> 924   | 1,855              | 9,640              |
| Germany.....                        | <sup>3</sup> 67                   | <sup>3</sup> 27  | 20               | 29               | <sup>5</sup> 30,105               | <sup>5</sup> 1,833 | 8,532              | 13,283             |
| Hungary.....                        | <sup>3</sup> 5                    |                  |                  | 1                | <sup>5</sup> 2,932                |                    |                    |                    |
| Russia.....                         |                                   |                  |                  |                  | <sup>5</sup> 11,765               |                    |                    |                    |
| United Kingdom:                     |                                   |                  |                  |                  |                                   |                    |                    |                    |
| England.....                        | 36                                | 16               | 17               | 21               | 33,053                            | 14,560             | 21,168             | 31,472             |
| Yugoslavia.....                     |                                   |                  |                  |                  |                                   |                    | <sup>6</sup> 1,323 | <sup>6</sup> 1,653 |
| Total Europe.....                   |                                   |                  |                  |                  | 119,690                           |                    |                    |                    |
| Australia.....                      | 1                                 | 1                | 1                | 1                | 1,564                             | 2,103              | 1,858              | 1,462              |
| Grand total.....                    |                                   |                  |                  |                  | 176,117                           |                    |                    |                    |

<sup>1</sup> Five-year average, except in a few cases where five-year statistics were unavailable.<sup>2</sup> Four States.<sup>3</sup> Old boundaries.  
Less than 500.<sup>5</sup> Unofficial.<sup>6</sup> Bohemia, Moravia, and Silesia.

TABLE 220.—Hops: World production so far as reported, 1895-1920.

| Year.     | Production. | Year.     | Production. | Year.     | Production. | Year.     | Production. |
|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|           | Pounds.     |           | Pounds.     |           | Pounds.     |           | Pounds.     |
| 1895..... | 204,894,000 | 1902..... | 170,063,000 | 1909..... | 128,173,000 | 1916..... | 92,143,000  |
| 1896..... | 188,509,000 | 1903..... | 174,457,000 | 1910..... | 188,951,000 | 1917..... | 81,104,000  |
| 1897..... | 186,219,000 | 1904..... | 178,802,000 | 1911..... | 163,810,000 | 1918..... | 45,589,000  |
| 1898..... | 166,100,000 | 1905..... | 277,260,000 | 1912..... | 224,493,000 | 1919..... | 71,257,000  |
| 1899..... | 231,533,000 | 1906..... | 180,998,000 | 1913..... | 174,642,000 | 1920..... | 106,877,000 |
| 1900..... | 174,683,000 | 1907..... | 215,923,000 | 1914..... | 224,179,000 |           |             |
| 1901..... | 201,902,000 | 1908..... | 230,220,000 | 1915..... | 163,084,000 |           |             |

90912°—YBK 1921—



## HOPS—Continued.

TABLE 221.—Hops: Acreage, production, and farm value, by States, in 1920 and 1921, and totals, 1915–1921.

[Leading producing States.]

| State and year. | Acreage. |        | Average yield in pounds per acre. |         | Production (thousands of pounds). |        | Average farm price, cents per pound Dec. 1. |      | Farm value (thousands of dollars). |       |
|-----------------|----------|--------|-----------------------------------|---------|-----------------------------------|--------|---|------|------------------------------------|-------|
|                 | 1920     | 1921   | 1920                              | 1921    | 1920                              | 1921   | 1920  | 1921 | 1920                               | 1921  |
| New York.....   | 1,000    | 1,000  | 950                               | 580     | 950                               | 580    | 60  | 40   | 570                                | 232   |
| Washington..... | 3,000    | 3,000  | 1,910                             | 1,700   | 5,730                             | 5,100  | 35  | 20   | 2,008                              | 1,020 |
| Oregon.....     | 12,000   | 12,000 | 725                               | 770     | 8,700                             | 9,240  | 35  | 25   | 3,045                              | 2,310 |
| California..... | 12,000   | 12,000 | 1,575                             | 1,185   | 18,900                            | 14,220 | 35  | 25   | 6,615                              | 3,555 |
| Total.....      | 28,000   | 28,000 | 1,224.3                           | 1,040.7 | 34,280                            | 29,140 | 35.7  | 24.4 | 12,236                             | 7,117 |
| 1919.....       | 21,000   |        | 1,189.0                           |         | 24,970                            |        | 77.6.                                       |      | 19,376                             |       |
| 1918.....       | 28,900   |        | 829.4                             |         | 21,481                            |        | 19.3  |      | 4,150                              |       |
| 1917.....       | 28,900   |        | 982.9                             |         | 29,338                            |        | 33.3  |      | 9,795                              |       |
| 1916.....       | 43,900   |        | 1,152.5                           |         | 50,595                            |        | 12.0  |      | 5,073                              |       |
| 1915.....       | 44,653   |        | 1,186.6                           |         | 52,986                            |        | 11.7  |      | 6,203                              |       |

TABLE 222.—Hops: Forecasts of production, monthly, with preliminary and final estimates.

| Year.     | July.          | August.        | September.     | October production estimate. | Final estimate. |
|-----------|----------------|----------------|----------------|------------------------------|-----------------|
|           | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i>               | <i>Pounds.</i>  |
| 1918..... | 32,494         | 30,473         | 31,325         | .....                        | 21,481          |
| 1919..... | 33,912         | 34,906         | 34,813         | 33,121                       | 24,970          |
| 1920..... | 36,764         | 37,693         | 38,685         | 38,893                       | 34,280          |
| 1921..... | 32,471         | 31,196         | 29,479         | 29,750                       | 29,140          |

¹ Preliminary.

TABLE 223.—Hop consumption and movement, 1910–1921.

[The total hop movement of the United States for the last 12 years is shown. The figures on the quantity consumed by brewers have been compiled from the records of the Treasury Department; exports and imports are as reported by the Department of Commerce.]

| Year ending June 30— | Consumed by brewers. | Exports.       |                | Total of brewers' consumption and exports. | Imports.       | Net domestic movement. |
|----------------------|----------------------|----------------|----------------|--|----------------|------------------------|
|                      |                      | Domestic.      | Foreign.       |  |                |                        |
|                      | <i>Pounds.</i>       | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i>                             | <i>Pounds.</i> | <i>Pounds.</i>         |
| 1910.....            | 43,293,764           | 10,539,254     | 14,590         | 53,837,608                                 | 3,200,560      | 50,637,048             |
| 1911.....            | 45,068,811           | 13,104,774     | 17,974         | 58,191,559                                 | 8,557,581      | 49,634,038             |
| 1912.....            | 42,436,665           | 12,190,663     | 35,869         | 54,663,197                                 | 2,991,125      | 51,672,072             |
| 1913.....            | 44,237,735           | 17,591,195     | 35,859         | 61,864,789                                 | 8,494,144      | 53,370,645             |
| 1914.....            | 43,987,623           | 24,262,896     | 30,224         | 68,280,743                                 | 5,332,025      | 62,948,718             |
| 1915.....            | 38,839,294           | 16,210,443     | 16,947         | 55,066,684                                 | 11,651,332     | 43,415,352             |
| 1916.....            | 37,451,610           | 22,408,818     | 134,571        | 59,995,999                                 | 675,704        | 59,320,295             |
| 1917.....            | 41,949,225           | 4,874,876      | 26,215         | 46,850,316                                 | 236,849        | 46,613,467             |
| 1918.....            | 33,481,415           | 3,494,579      | 37,823         | 37,013,817                                 | 121,288        | 36,802,529             |
| 1919.....            | 13,924,650           | 7,466,952      | 4,719          | 21,396,321                                 | 6              | 21,396,315             |
| 1920.....            | 16,440,894           | 30,778,508     | 104,188        | 37,324,609                                 | 2,696,264      | 34,628,336             |
| 1921.....            | 15,988,982           | 22,206,028     | 827,903        | 29,022,813                                 | 4,307,998      | 24,714,815             |

Including hops used to make "cereal beverages."

## HOPS—Continued.

TABLE 224.—Hops: Wholesale price per pound, 1921-1913.

| Date.          | New York,<br>choice, State. |       |          | San Francisco. <sup>1</sup> |       |          | Date.     | New York,<br>choice, State. |       |          | San Francisco. <sup>1</sup> |                 |          |
|----------------|-----------------------------|-------|----------|-----------------------------|-------|----------|-----------|-----------------------------|-------|----------|-----------------------------|-----------------|----------|
|                | Low.                        | High. | Average. | Low.                        | High. | Average. |           | Low.                        | High. | Average. | Low.                        | High.           | Average. |
| 1921.          | Cts.                        | Cts.  | Cts.     | Cts.                        | Cts.  | Cts.     | 1920..... | Cts.                        | Cts.  | Cts.     | Cts.                        | Cts.            | Cts.     |
| January.....   | 42                          | 45    | 43.5     | 33                          | 35    | 34.0     | 1919..... | 41                          | 105   | 80.2     | 33                          | 75              | 61.7     |
| February.....  | 38                          | 44    | 41.5     | 33                          | 35    | 34.0     | 1918..... | 37                          | 85    | 59.8     | 34                          | 84              | 59.7     |
| March.....     | 37                          | 40    | 38.9     | 33                          | 35    | 34.0     | 1917..... | 23                          | 54    | 37.9     | 19                          | 22 <sup>1</sup> | 19.4     |
| April.....     | 36                          | 40    | 38.4     | 33                          | 35    | 34.0     | 1916..... | 34                          | 90    | .....    | 6                           | 40              | .....    |
| May.....       | 28                          | 40    | 32.9     | 12                          | 35    | 30.4     | 1915..... | 15                          | 55    | .....    | 7                           | 12 <sup>1</sup> | .....    |
| June.....      | 28                          | 30    | 29.0     | 12                          | 20    | 16.0     | 1914..... | 13                          | 30    | .....    | 10                          | 15              | .....    |
| July.....      | 26                          | 30    | 28.0     | 12                          | 20    | 16.0     | 1913..... | 23                          | 50    | .....    | 10                          | 30              | .....    |
| August.....    | 26                          | 30    | 28.0     | 12                          | 20    | 16.0     |           | 17                          | 48    | .....    | 19                          | 30              | .....    |
| September..... | 28                          | 50    | 39.9     | 17                          | 22    | 19.5     |           |                             |       |          |                             |                 |          |
| October.....   | 42                          | 45    | 43.3     | 17                          | 22    | 19.5     |           |                             |       |          |                             |                 |          |
| November.....  | 40                          | 42    | 41.3     | 17                          | 22    | 19.5     |           |                             |       |          |                             |                 |          |
| December.....  | 36                          | 42    | 39.7     | 17                          | 22    | 19.5     |           |                             |       |          |                             |                 |          |
|                | 26                          | 50    | 37.0     | 12                          | 35    | 24.4     |           |                             |       |          |                             |                 |          |

<sup>1</sup> Called "Washington" hops in 1916, "Oregon" hops for January-March, 1919; "1920 crop" 1920; "1920 crop," 1921.

TABLE 225.—Hops: International trade, calendar years 1909-1920.

[Lupulin and hopfenmehl (hop meal) are not included with hops in the data shown. See "General note, Table 125.]

| Country.                            | Average, 1909-1913. |                  | 1918             |                  | 1919             |                  | 1920             |                  |
|-------------------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                     | Imports.            | Exports.         | Imports.         | Exports.         | Imports.         | Exports.         | Imports.         | Exports.         |
| PRINCIPAL EXPORT-<br>ING COUNTRIES. | 1,000<br>pounds.    | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. |
| Austria-Hungary.....                | 938                 | 18,333           | .....            | .....            | .....            | .....            | .....            | .....            |
| Germany.....                        | 7,688               | 17,564           | .....            | .....            | .....            | .....            | 87               | 21,624           |
| New Zealand.....                    | 61                  | 352              | 29               | 225              | 28               | 248              | 19               | 181              |
| Russia.....                         | 1,258               | 2,348            | .....            | .....            | .....            | .....            | .....            | .....            |
| United States.....                  | 6,285               | 15,410           | 77               | 3,670            | 467              | 20,798           | 5,949            | 23,624           |
| PRINCIPAL IMPORT-<br>ING COUNTRIES. |                     |                  |                  |                  |                  |                  |                  |                  |
| Australia.....                      | 1,106               | 22               | 598              | 195              | 276              | 23               | 18,681           | 12,222           |
| Belgium.....                        | 6,915               | 4,814            | .....            | .....            | 8,089            | 2,653            | 122              | .....            |
| British India.....                  | 240                 | .....            | 532              | .....            | 480              | .....            | 476              | .....            |
| British South Africa.....           | 391                 | ( <sup>1</sup> ) | 570              | .....            | 553              | .....            | 1,657            | 63               |
| Canada.....                         | 1,396               | 176              | 849              | 15               | 1,780            | 7                | 525              | 28               |
| Denmark.....                        | 1,027               | * 1              | 2,147            | 5                | 1,417            | 1                | 5,877            | 4,170            |
| France.....                         | 5,436               | 335              | 810              | 612              | 2,899            | 1,620            | 1,562            | 3,013            |
| Netherlands.....                    | 2,933               | 1,405            | 4,612            | 26               | 1,178            | 1,471            | 997              | .....            |
| Sweden.....                         | 987                 | * 1              | 4,151            | 4                | 834              | 17               | 153              | .....            |
| Switzerland.....                    | 1,237               | * 2              | 300              | .....            | 186              | .....            | 51,049           | 411              |
| United Kingdom.....                 | 21,028              | 2,162            | .....            | 775              | 17,258           | 292              | 2,286            | 5                |
| Other countries.....                | 4,062               | 10               | 4,005            | 2                | 3,835            | 2                | .....            | .....            |
| Total.....                          | 62,969              | 62,941           | 18,660           | 5,529            | 39,219           | 27,132           | 86,441           | 67,341           |

Less than 500 pounds.

\* 3 year average.

\* 1 year.

## BEANS.

TABLE 226.—Beans: Area and production in undermentioned countries, 1909–1920.

| Country.                           | Area.                               |                |                  |                | Production.                         |                  |                   |                  |
|------------------------------------|-------------------------------------|----------------|------------------|----------------|-------------------------------------|------------------|-------------------|------------------|
|                                    | Average, <sup>1</sup><br>1909–1913. | 1918           | 1919             | 1920           | Average, <sup>1</sup><br>1909–1913. | 1918             | 1919              | 1920             |
| <b>NORTH AMERICA.</b>              |                                     |                |                  |                |                                     |                  |                   |                  |
| United States (6 States).....      | 1,000<br>788                        | 1,000<br>1,744 | 1,000<br>2,1,060 | 1,000<br>2,838 | 1,000<br>11,166                     | 1,000<br>17,397  | 1,000<br>2,13,349 | 1,000<br>2,9,077 |
| <b>Canada:</b>                     |                                     |                |                  |                |                                     |                  |                   |                  |
| Nova Scotia.....                   | 1                                   | 9              | 7                | 5              | 32                                  | 143              | 87                | 86               |
| New Brunswick.....                 | 2                                   | 5              | 7                | 4              | 21                                  | 85               | 106               | 69               |
| Quebec.....                        | 6                                   | 110            | 43               | 36             | 125                                 | 1,867            | 853               | 645              |
| Ontario.....                       | 42                                  | 100            | 23               | 23             | 796                                 | 1,388            | 289               | 831              |
| Other.....                         | .....                               | 4              | 4                | 4              | .....                               | 80               | 54                | 84               |
| Total Canada.....                  | 51                                  | 228            | 84               | 72             | 974                                 | 3,564<br>2,4,858 | 1,389             | 1,265            |
| <b>Mexico.....</b>                 | .....                               | .....          | .....            | .....          | .....                               | .....            | .....             | .....            |
| <b>SOUTH AMERICA.</b>              |                                     |                |                  |                |                                     |                  |                   |                  |
| Argentina.....                     | 65                                  | .....          | .....            | .....          | .....                               | .....            | .....             | .....            |
| Brazil.....                        | .....                               | .....          | .....            | .....          | .....                               | .....            | .....             | .....            |
| Chile.....                         | 79                                  | 2,132          | .....            | .....          | 1,398                               | 2,1,386          | 2,2,547           | 2,1,713          |
| <b>EUROPE.</b>                     |                                     |                |                  |                |                                     |                  |                   |                  |
| Austria.....                       | 1,648                               | 9              | 7                | 7              | 1,666                               | 82               | 73                | 85               |
| Croatia Slavonia *.....            | 25                                  | .....          | .....            | .....          | 265                                 | .....            | .....             | .....            |
| Do. *.....                         | 472                                 | .....          | .....            | .....          | 2,011                               | .....            | .....             | .....            |
| Belgium.....                       | 21                                  | .....          | .....            | .....          | 604                                 | .....            | .....             | .....            |
| Bulgaria.....                      | 178                                 | .....          | .....            | .....          | 1,895                               | .....            | .....             | .....            |
| Denmark.....                       | 9                                   | 20             | 24               | 33             | 369                                 | 1,417            | 1,644             | 1,1,357          |
| France.....                        | 1,554                               | 478            | 513              | 566            | 1,518                               | 5,288            | 5,681             | 8,250            |
| Hungary.....                       | 44                                  | .....          | .....            | .....          | 599                                 | .....            | .....             | .....            |
| Do. *.....                         | 1,471                               | .....          | .....            | .....          | 6,917                               | .....            | .....             | .....            |
| Italy.....                         | 2,023                               | 1,065          | 2,302            | 2,318          | 21,038                              | 15,363           | 14,539            | 12,452           |
| Luxemburg.....                     | 4                                   | .....          | .....            | .....          | 73                                  | .....            | .....             | .....            |
| Netherlands.....                   | 64                                  | 61             | 88               | .....          | 1,853                               | 2,068            | .....             | .....            |
| Poland.....                        | 29                                  | .....          | 141              | 198            | 505                                 | .....            | 1,802             | 2,689            |
| Rumania.....                       | 1,265                               | .....          | 60               | .....          | 1,335                               | .....            | 870               | .....            |
| Do. *.....                         | 1,265                               | .....          | 1,180            | .....          | 3,630                               | .....            | 3,115             | .....            |
| Russia, proper *.....              | 523                                 | .....          | .....            | .....          | 6,027                               | .....            | .....             | .....            |
| Northern Caucasus *.....           | 4                                   | .....          | .....            | .....          | 58                                  | .....            | .....             | .....            |
| Serbia *.....                      | 25                                  | .....          | .....            | .....          | 1,676                               | .....            | .....             | .....            |
| Spain.....                         | 1,132                               | 1,278          | 1,266            | 1,243          | 11,908                              | 14,025           | 12,812            | 13,661           |
| Sweden.....                        | 10                                  | 6              | 6                | 5              | 174                                 | 111              | 151               | 120              |
| <b>United Kingdom:</b>             |                                     |                |                  |                |                                     |                  |                   |                  |
| England.....                       | 276                                 | 248            | 282              | 244            | 8,015                               | 7,032            | 6,776             | 7,600            |
| Wales.....                         | 1                                   | 3              | 2                | 2              | 33                                  | 78               | 62                | 55               |
| Scotland.....                      | 9                                   | 7              | 7                | 6              | 318                                 | 266              | 262               | 215              |
| Ireland.....                       | 2                                   | 10 2           | 10 2             | .....          | 67                                  | 75               | .....             | .....            |
| Total United Kingdom.....          | 288                                 | 260            | 293              | .....          | 8,433                               | 7,451            | .....             | .....            |
| Yugo-Slavia.....                   | .....                               | .....          | .....            | .....          | .....                               | .....            | .....             | .....            |
| <b>ASIA.</b>                       |                                     |                |                  |                |                                     |                  |                   |                  |
| British India.....                 | 13,156                              | 16,255         | 7,367            | .....          | 143,360                             | 165,275          | 71,701            | .....            |
| <b>Japanese Empire:</b>            |                                     |                |                  |                |                                     |                  |                   |                  |
| Japan.....                         | 1,598                               | 1,462          | .....            | .....          | 23,175                              | 23,998           | .....             | .....            |
| Formosa.....                       | 79                                  | .....          | .....            | .....          | 657                                 | .....            | .....             | .....            |
| Chosen (Korea).....                | 1,229                               | .....          | .....            | .....          | 14,240                              | .....            | .....             | .....            |
| Total Japanese Empire.....         | 2,906                               | .....          | .....            | .....          | 38,072                              | .....            | .....             | .....            |
| <b>Russia (9 governments).....</b> | 22                                  | .....          | .....            | .....          | 225                                 | .....            | .....             | .....            |
| <b>AFRICA.</b>                     |                                     |                |                  |                |                                     |                  |                   |                  |
| Algeria.....                       | 110                                 | .....          | .....            | .....          | 1,132                               | .....            | .....             | .....            |
| Egypt.....                         | 544                                 | 494            | 524              | 534            | .....                               | 12,816           | 10,283            | .....            |
| <b>AUSTRALIA.</b>                  |                                     |                |                  |                |                                     |                  |                   |                  |
| Australia.....                     | 40                                  | 2              | .....            | .....          | 794                                 | 43               | .....             | .....            |

<sup>1</sup> Five-year average, except in a few cases where statistics were unavailable.<sup>2</sup> Seven States.<sup>3</sup> Unofficial.<sup>4</sup> Old boundaries.<sup>5</sup> Grown alone.<sup>6</sup> Grown with corn.<sup>7</sup> Includes pulse.<sup>8</sup> Former Russian Poland, Western Galicia, and Posen.<sup>9</sup> Republic of Poland.<sup>10</sup> Includes peas.

## BEANS—Continued.

TABLE 227.—Beans (dry): Acreage, production, and value, by States, 1920 and 1921, and totals, 1914-1921.

[Leading producing States.]

| State and year. | Thousands of acres. |      | Average yield in bushels per acre. |      | Production (thousands of bushels). |       | Average farm price per bushel Nov. 15. |        | Farm value (thousands of dollars). |        |
|-----------------|---------------------|------|------------------------------------|------|------------------------------------|-------|--|--------|------------------------------------|--------|
|                 | 1920                | 1921 | 1920                               | 1921 | 1920                               | 1921  | 1920                                   | 1921   | 1920                               | 1921   |
| New York.....   | 54                  | 67   | 14.0                               | 16.0 | 756                                | 1,072 | \$3.50                                 | \$2.95 | 2,646                              | 3,162  |
| Michigan.....   | 286                 | 263  | 13.0                               | 11.3 | 3,718                              | 2,972 | 2.50                                   | 2.40   | 8,295                              | 7,133  |
| Colorado.....   | 52                  | 38   | 8.0                                | 9.0  | 416                                | 342   | 3.15                                   | 2.70   | 1,310                              | 922    |
| New Mexico..... | 114                 | 105  | 7.5                                | 7.9  | 855                                | 830   | 3.04                                   | 2.50   | 2,599                              | 2,075  |
| Arizona.....    | 7                   | 8    | 6.3                                | 8.5  | 44                                 | 68    | 4.10                                   | 3.50   | 180                                | 238    |
| Idaho.....      | 25                  | 18   | 11.5                               | 12.0 | 288                                | 216   | 3.04                                   | 2.95   | 876                                | 637    |
| California..... | 300                 | 272  | 10.0                               | 13.3 | 3,000                              | 3,618 | 3.30                                   | 2.50   | 9,900                              | 10,130 |
| Total.....      | 838                 | 771  | 10.8                               | 11.8 | 9,077                              | 9,118 | 2.95                                   | 2.66   | 26,806                             | 24,298 |
| 1919.....       | 1,060               |      | 12.6                               |      | 13,349                             |       | 4.26                                   |        | 56,811                             |        |
| 1918.....       | 1,744               |      | 10.0                               |      | 17,397                             |       | 5.23                                   |        | 91,863                             |        |
| 1917.....       | 1,821               |      | 8.8                                |      | 16,045                             |       | 6.50                                   |        | 104,350                            |        |
| 1916.....       | 1,107               |      | 9.7                                |      | 10,715                             |       | 5.10                                   |        | 54,685                             |        |
| 1915.....       | 928                 |      | 11.1                               |      | 10,321                             |       | 2.59                                   |        | 26,771                             |        |
| 1914.....       | 875                 |      | 13.2                               |      | 11,585                             |       | 2.26                                   |        | 26,213                             |        |

TABLE 228.—Beans: Forecast of production, monthly, with preliminary and final estimates.

[000 omitted.]

| Year.     | July.    | August.  | September. | October production estimate. | Final estimate. |
|-----------|----------|----------|------------|------------------------------|-----------------|
|           | Bushels. | Bushels. | Bushels.   | Bushels.                     | Bushels.        |
| 1917..... | 22,141   | 19,443   | 19,999     | 15,814                       | 16,045          |
| 1918..... | 19,791   | 19,497   | 19,894     | 17,802                       | 17,397          |
| 1919..... | 12,302   | 11,638   | 11,363     | 12,690                       | 13,349          |
| 1920..... | 9,451    | 9,074    | 9,101      | 9,364                        | 9,077           |
| 1921..... | 8,982    | 8,783    | 8,780      | 9,332                        | 9,118           |

TABLE 229.—Beans: Farm price per bushel on 15th of each month, 1910-1921.

| Year.     | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. |
|-----------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|
| 1910..... | \$2.23   | \$2.23   | \$2.17   | \$2.16   | \$2.17  | \$2.29   | \$2.34   | \$2.27   | \$2.28    | \$2.25   | \$2.14   | \$2.20   |
| 1911..... | 2.20     | 2.23     | 2.17     | 2.20     | 2.17    | 2.19     | 2.23     | 2.20     | 2.26      | 2.27     | 2.34     | 2.42     |
| 1912..... | 2.38     | 2.38     | 2.42     | 2.37     | 2.52    | 2.62     | 2.47     | 2.40     | 2.38      | 2.34     | 2.25     | 2.31     |
| 1913..... | 2.26     | 2.19     | 2.10     | 2.11     | 2.18    | 2.23     | 2.22     | 2.11     | 2.08      | 2.25     | 2.20     | 2.12     |
| 1914..... | 2.17     | 2.09     | 2.05     | 2.11     | 2.31    | 2.23     | 2.22     | 2.54     | 2.46      | 2.17     | 2.28     | 2.40     |
| 1915..... | 2.63     | 3.02     | 2.89     | 2.81     | 2.93    | 2.87     | 2.75     | 2.67     | 2.70      | 2.93     | 3.03     | 3.30     |
| 1916..... | 3.47     | 3.43     | 3.34     | 3.42     | 3.56    | 3.72     | 5.09     | 4.59     | 4.60      | 4.47     | 5.03     | 5.77     |
| 1917..... | 5.71     | 6.07     | 6.49     | 7.37     | 8.94    | 8.99     | 8.07     | 7.29     | 6.69      | 7.48     | 7.33     | 7.00     |
| 1918..... | 7.00     | 7.08     | 6.95     | 6.95     | 6.87    | 6.28     | 5.88     | 6.11     | 5.67      | 5.52     | 5.46     | 4.96     |
| 1919..... | 4.95     | 4.52     | 4.40     | 4.44     | 4.19    | 4.39     | 4.25     | 4.30     | 4.36      | 4.27     | 4.42     | 4.41     |
| 1920..... | 4.70     | 4.47     | 4.32     | 4.41     | 4.36    | 4.49     | 4.47     | 4.17     | 3.88      | 3.47     | 3.27     | 2.99     |
| 1921..... | 2.95     | 2.85     | 2.89     | 2.69     | 2.73    | 2.82     | 2.75     | 2.83     | 2.99      | 2.87     | 2.85     | 2.83     |

## BEANS—Continued.

TABLE 230.—Beans: Wholesale price per 100 pounds, 1921-1913.

| Date.          | Boston, pea. |        |          | Chicago, pea. <sup>1</sup> |        |          | Detroit, pea. |        |          | San Francisco, small white. |        |          |
|----------------|--------------|--------|----------|----------------------------|--------|----------|---------------|--------|----------|-----------------------------|--------|----------|
|                | Low.         | High.  | Average. | Low.                       | High.  | Average. | Low.          | High.  | Average. | Low.                        | High.  | Average. |
| 1921.          | Dolls.       | Dolls. | Dolls.   | Dolls.                     | Dolls. | Dolls.   | Dolls.        | Dolls. | Dolls.   | Dolls.                      | Dolls. | Dolls.   |
| January.....   | 4.75         | 5.25   | 4.98     | 4.25                       | 4.50   | 4.38     | 4.00          | 4.00   | 4.00     | 3.75                        | 4.00   | 3.82     |
| February.....  | 4.25         | 5.00   | 4.68     | 4.25                       | 4.75   | 4.55     | 3.75          | 4.00   | 3.89     | 3.50                        | 4.00   | 3.86     |
| March.....     | 4.50         | 4.85   | 4.64     | 4.25                       | 4.75   | 4.56     | 3.50          | 3.80   | 3.68     | 3.50                        | 4.00   | 3.63     |
| April.....     | 4.25         | 4.75   | 4.52     | 3.60                       | 4.50   | 4.06     | 3.50          | 3.75   | 3.60     | 3.30                        | 3.75   | 3.49     |
| May.....       | 4.25         | 4.75   | 4.44     | 3.60                       | 4.50   | 4.01     | 3.60          | 4.00   | 3.70     | 3.20                        | 3.60   | 3.39     |
| June.....      | 4.50         | 4.75   | 4.64     | 4.00                       | 4.50   | 4.26     | 3.50          | 3.75   | 3.60     | 3.25                        | 3.60   | 3.42     |
| July.....      | 4.50         | 4.75   | 4.58     | 3.80                       | 4.75   | 4.02     | 3.30          | 4.00   | 3.47     | 3.25                        | 4.00   | 3.68     |
| August.....    | 4.50         | 5.50   | 4.96     | 4.50                       | 5.50   | 4.84     | 3.85          | 4.75   | 4.41     | 3.75                        | 4.65   | 4.22     |
| September..... | 5.25         | 5.50   | 5.41     | 5.10                       | 5.50   | 5.34     | 4.30          | 4.78   | 4.58     | 4.40                        | 4.78   | 4.55     |
| October.....   | 5.00         | 5.25   | 5.24     | 4.82                       | 5.50   | 5.22     | 4.20          | 4.55   | 4.39     | 4.50                        | 4.80   | 4.68     |
| November.....  | 5.25         | 5.50   | 5.34     | 5.00                       | 5.50   | 5.17     | 4.20          | 4.45   | 4.30     | 4.50                        | 4.90   | 4.79     |
| December.....  | 5.00         | 5.25   | 5.08     | 4.75                       | 5.25   | 4.94     | 4.20          | 4.30   | 4.27     | 4.60                        | 4.90   | 4.79     |
| Year.....      | 4.25         | 5.50   | 4.88     | 3.60                       | 5.50   | 4.61     | 3.30          | 4.78   | 3.99     | 3.20                        | 4.90   | 4.03     |
| 1920.....      | 4.75         | 8.25   | 6.96     | 4.25                       | 9.25   | 6.76     | 3.90          | 7.90   | 6.25     | 3.75                        | 6.75   | 5.72     |
| 1919.....      | 6.00         | 10.00  | 7.74     | 6.50                       | 9.50   | 7.92     | 6.50          | 9.00   | 7.54     | 5.75                        | 8.90   | 7.05     |
| 1918.....      | 9.00         | 14.00  | 12.03    | 8.25                       | 15.00  | 11.49    | 8.33          | 13.25  | 10.75    | 8.90                        | 12.75  | 11.64    |
| 1917.....      | 6.50         | 15.00  | 9.24     | 6.40                       | 14.50  | 9.09     | 6.25          | 13.25  | 8.60     | 10.50                       | 16.00  | 13.20    |
| 1916.....      | 3.80         | 7.25   | 4.96     | 3.00                       | 8.00   | 4.24     | 3.50          | 7.00   | 4.82     | 6.25                        | 11.50  | 8.05     |
| 1915.....      | 2.85         | 4.10   | 3.38     | 2.40                       | 4.10   | 3.19     | 2.00          | 3.80   | 3.06     | 4.50                        | 6.40   | 5.30     |
| 1914.....      | 2.10         | 3.10   | 2.10     | 1.60                       | 3.10   | 2.22     | 1.80          | 2.90   | 2.22     | 4.00                        | 6.00   | 4.98     |
| 1913.....      | 2.15         | 2.60   | 2.36     | 1.15                       | 2.50   | 1.81     | 1.75          | 2.20   | 2.50     | 4.50                        | 6.00   | 5.16     |

<sup>1</sup> Hand picked, choice to fancy.

## SOY BEANS.

TABLE 231.—Soy beans: Acreage, production, and value, by States, 1920 and 1921, and totals, 1917-1921.

[Leading producing States.]

| State and year.     | Thousands of acres. |      | Average yield in bushels per acre. |      | Production (thousands of bushels). |       | Average farm price per bushel Nov. 15. |        | Farm value (thousands of dollars). |       |
|---------------------|---------------------|------|------------------------------------|------|------------------------------------|-------|--|--------|------------------------------------|-------|
|                     | 1920                | 1921 | 1920                               | 1921 | 1920                               | 1921  | 1920                                   | 1921   | 1920                               | 1921  |
| Virginia.....       | 11                  | 12   | 19.0                               | 13.5 | 209                                | 162   | \$3.10                                 | \$2.60 | 648                                | 421   |
| North Carolina..... | 91                  | 113  | 16.5                               | 18.0 | 1,502                              | 2,034 | 2.78                                   | 2.05   | 4,176                              | 4,170 |
| South Carolina..... | 1                   | 1    | 10.0                               | 10.0 | 10                                 | 10    | 3.00                                   | 2.10   | 30                                 | 21    |
| Georgia.....        | 1                   | 1    | 11.0                               | 13.0 | 11                                 | 13    | 3.35                                   | 2.15   | 37                                 | 28    |
| Ohio.....           | 8                   | 8    | 8.9                                | 7.0  | 64                                 | 56    | 4.00                                   | 3.00   | 256                                | 168   |
| Indiana.....        | 3                   | 4    | 14.0                               | 11.0 | 42                                 | 44    | 5.00                                   | 2.70   | 210                                | 119   |
| Illinois.....       | 4                   | 6    | 11.5                               | 9.8  | 46                                 | 59    | 3.92                                   | 1.42   | 180                                | 84    |
| Michigan.....       | 8                   | 7    | 12.0                               | 8.0  | 96                                 | 56    | 4.00                                   | 3.00   | 384                                | 168   |
| Wisconsin.....      | 4                   | 4    | 7.0                                | 8.2  | 28                                 | 33    | 4.00                                   | 2.65   | 112                                | 87    |
| Missouri.....       | 3                   | 4    | 16.0                               | 14.0 | 48                                 | 56    | 2.60                                   | 2.50   | 125                                | 140   |
| Kentucky.....       | 4                   | 6    | 15.0                               | 13.0 | 60                                 | 78    | 3.50                                   | 2.50   | 210                                | 195   |
| Tennessee.....      | 8                   | 8    | 7.5                                | 8.0  | 52                                 | 64    | 2.85                                   | 2.20   | 148                                | 141   |
| Alabama.....        | 8                   | 9    | 9.8                                | 12.6 | 78                                 | 113   | 4.09                                   | 2.20   | 312                                | 249   |
| Mississippi.....    | 2                   | 2    | 10.0                               | 11.0 | 20                                 | 22    | 3.00                                   | 2.20   | 60                                 | 48    |
| Louisiana.....      | 1                   | 1    | 12.5                               | 15.0 | 12                                 | 15    | 3.17                                   | 2.75   | 38                                 | 41    |
| Total.....          | 156                 | 186  | 14.6                               | 15.1 | 2,278                              | 2,815 | 3.04                                   | 2.16   | 6,926                              | 6,080 |
| 1919.....           | 155                 |      | 13.2                               |      | 2,045                              |       | 3.33                                   |        | 6,814                              |       |
| 1918.....           | 169                 |      | 17.7                               |      | 2,997                              |       | 3.20                                   |        | 9,590                              |       |
| 1917.....           | 154                 |      | 14.8                               |      | 2,223                              |       | 2.86                                   |        | 6,529                              |       |

## SOY BEANS—Continued.

TABLE 232.—Soy beans: Farm price per bushel on 15th of month, 1913-1922.

| Date.        | 1913-<br>1914. | 1914-<br>1915. | 1915-<br>1916. | 1916-<br>1917. | 1917-<br>1918. | 1918-<br>1919. | 1919-<br>1920. | 1920-<br>1921. | 1921-<br>1922. |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Oct. 15..... | \$1.96         | \$2.08         | \$1.88         | \$2.13         | \$2.73         | \$3.36         | \$3.34         | \$3.41         | \$2.20         |
| Nov. 15..... | 1.57           | 2.15           | 2.08           | 2.13           | 2.86           | 3.50           | 3.35           | 3.00           | 2.22           |
| Dec. 15..... | 1.72           | 2.24           | 2.23           | 2.18           | 3.33           | 3.29           | 3.44           | 2.28           | 2.03           |
| Jan. 15..... | 1.96           | 2.35           | 2.31           | 2.20           | 3.47           | 3.00           | 3.76           | 2.18           | 2.11           |
| Feb. 15..... | 1.80           | 2.26           | 2.39           | 2.45           | 3.82           | 3.00           | 4.05           | 2.17           | 2.10           |

## COWPEAS.

TABLE 233.—Cowpeas: Acreage, production, and value, by States, 1920 and 1921, and totals, 1917-1921.

[Leading producing States.]

| State and year.     | Thousands<br>of acres. |       | Average yield<br>in bushels<br>per acre. |      | Production<br>(thousands<br>of bushels). |       | Average farm<br>price, cents per<br>bushel Nov. 15. |       | Farm value<br>(thousands<br>of dollars). |        |
|---------------------|------------------------|-------|--|------|--|-------|---|-------|--|--------|
|                     | 1920                   | 1921  | 1920                                     | 1921 | 1920                                     | 1921  | 1920  | 1921  | 1920                                     | 1921   |
| Virginia.....       | 21                     | 21    | 11.0                                     | 10.0 | 231                                      | 210   | 230   | 260   | 670                                      | 546    |
| North Carolina..... | 110                    | 93    | 9.0                                      | 8.2  | 990                                      | 763   | 257   | 260   | 2,544                                    | 1,984  |
| South Carolina..... | 252                    | 302   | 9.0                                      | 6.0  | 2,268                                    | 1,812 | 225   | 177   | 5,103                                    | 3,307  |
| Georgia.....        | 150                    | 165   | 9.0                                      | 9.4  | 1,350                                    | 1,531 | 217   | 160   | 2,930                                    | 2,482  |
| Florida.....        | 6                      | 6     | 8.0                                      | 10.0 | 48                                       | 60    | 275   | 240   | 132                                      | 144    |
| Indiana.....        | 6                      | 6     | 16.0                                     | 15.0 | 96                                       | 120   | 300   | 262   | 288                                      | 314    |
| Illinois.....       | 18                     | 17    | 6.5                                      | 6.6  | 117                                      | 112   | 284   | 135   | 332                                      | 151    |
| Missouri.....       | 10                     | 15    | 12.0                                     | 10.0 | 120                                      | 150   | 200   | 220   | 240                                      | 350    |
| Kentucky.....       | 12                     | 13    | 12.0                                     | 11.0 | 144                                      | 143   | 375   | 178   | 540                                      | 255    |
| Tennessee.....      | 16                     | 16    | 5.0                                      | 6.0  | 80                                       | 96    | 240   | 155   | 192                                      | 173    |
| Alabama.....        | 162                    | 188   | 9.7                                      | 8.5  | 1,571                                    | 1,593 | 200   | 145   | 3,132                                    | 2,517  |
| Mississippi.....    | 100                    | 150   | 8.0                                      | 10.0 | 800                                      | 1,500 | 212   | 170   | 1,696                                    | 2,550  |
| Louisiana.....      | 24                     | 23    | 7.3                                      | 7.8  | 175                                      | 179   | 261   | 223   | 457                                      | 369    |
| Texas.....          | 65                     | 70    | 11.0                                     | 12.0 | 715                                      | 840   | 285   | 173   | 2,038                                    | 1,453  |
| Oklahoma.....       | 5                      | 5     | 6.9                                      | 7.4  | 34                                       | 37    | 230   | 180   | 73                                       | 66     |
| Arkansas.....       | 33                     | 41    | 5.0                                      | 10.0 | 165                                      | 410   | 245   | 145   | 401                                      | 594    |
| Total.....          | 990                    | 1,133 | 9.0                                      | 8.5  | 8,904                                    | 9,581 | 233.4   | 177.0 | 20,786                                   | 16,980 |
| 1919.....           | 939                    |       | 6.3                                      |      | 6,026                                    |       | 274.4   |       | 16,533                                   |        |
| 1918.....           | 2,093                  |       | 6.2                                      |      | 12,427                                   |       | 231.4   |       | 28,756                                   |        |
| 1917.....           | 1,829                  |       | 7.0                                      |      | 12,787                                   |       | 227.1   |       | 29,039                                   |        |

TABLE 234.—Cowpeas: Farm price, cents per bushel, on 15th of month, 1915-1921.

| Year.     | Jan.<br>15. | Feb.<br>15. | Mar.<br>15. | Apr.<br>15. | May<br>15. | June<br>15. | July<br>15. | Aug.<br>15. | Sept.<br>15. | Oct.<br>15. | Nov.<br>15. | Dec.<br>15. |
|-----------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| 1915..... |             | 187.0       | 198.8       | 203.7       | 201.9      | 194.5       | 179.8       | 174.4       | 155.4        | 156.0       | 151.4       | 151.8       |
| 1916..... | 156.3       | 157.2       | 153.7       | 150.2       | 145.8      | 140.0       | 133.1       | 141.3       | 142.4        | 148.1       | 161.6       | 177.0       |
| 1917..... | 192.2       | 210.0       | 231.8       | 253.4       | 293.1      | 302.1       | 303.2       | 285.4       | 217.0        | 219.5       | 227.1       | 237.5       |
| 1918..... | 262.2       | 292.5       | 301.5       | 292.5       | 283.3      | 257.4       | 248.4       | 241.3       | 226.2        | 233.9       | 231.4       | 237.6       |
| 1919..... | 238.9       | 252.1       | 248.8       | 267.6       | 292.3      | 343.9       | 342.8       | 310.3       | 269.4        | 260.9       | 270.7       | 280.6       |
| 1920..... | 312.9       | 372.4       | 394.0       | 421.4       | 484.4      | 483.7       | 470.8       | 422.7       | 368.8        | 273.7       | 243.4       | 220.0       |
| 1921..... | 197.2       | 204.2       | 204.7       | 215.5       | 242.7      | 265.1       | 287.2       | 240.9       | 199.7        | 201.2       | 184.8       | 176.1       |

## PEAS.

TABLE 235.—Peas: Area and production in undermentioned countries, 1909-1920.

| Country.                                  | Area.                                 |                  |                  |                  | Production.                       |                   |                   |                   |
|---|---------------------------------------|------------------|------------------|------------------|-----------------------------------|-------------------|-------------------|-------------------|
|   | Average <sup>1</sup><br>1909-<br>1913 | 1918             | 1919             | 1920             | Average <sup>1</sup><br>1909-1913 | 1918              | 1919              | 1920              |
| <b>NORTH AMERICA.</b>                     | 1,000<br>acres.                       | 1,000<br>acres.  | 1,000<br>acres.  | 1,000<br>acres.  | 1,000<br>bushels.                 | 1,000<br>bushels. | 1,000<br>bushels. | 1,000<br>bushels. |
| United States.....                        | ( <sup>2</sup> )                      | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> )                  | ( <sup>2</sup> )  | ( <sup>2</sup> )  | ( <sup>2</sup> )  |
| Canada:                                   |                                       |                  |                  |                  |                                   |                   |                   |                   |
| Prince Edward Island.....                 | 1                                     | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 4                                 | 7                 | 8                 | 3                 |
| Nova Scotia.....                          | 1                                     | 2                | 2                | 1                | 14                                | 33                | 38                | 21                |
| New Brunswick.....                        | 1                                     | 4                | 5                | 3                | 21                                | 60                | 69                | 43                |
| Quebec.....                               | 33                                    | 107              | 82               | 61               | 520                               | 1,664             | 1,225             | 1,035             |
| Ontario.....                              | 267                                   | 114              | 127              | 109              | 4,452                             | 2,381             | 1,817             | 2,210             |
| Manitoba.....                             |                                       |                  | 6                | 4                |                                   |                   | 81                | 62                |
| Saskatchewan.....                         | ( <sup>4</sup> )                      | 4                | 5                | 2                | 7                                 | 85                | 87                | 36                |
| Alberta.....                              | ( <sup>5</sup> )                      | 2                | 2                | 3                | 7                                 | 36                | 29                | 49                |
| British Columbia.....                     | 1                                     | 2                | 2                | 3                | 42                                | 47                | 52                | 69                |
| Total Canada.....                         | 304                                   | 235              | 231              | 186              | 5,097                             | 4,313             | 3,406             | 3,528             |
| <b>SOUTH AMERICA.</b>                     |                                       |                  |                  |                  |                                   |                   |                   |                   |
| Chile.....                                | 4 26                                  | 5 26             |                  |                  | 4 387                             | 5 544             | 5 536             | 5 429             |
| <b>EUROPE.</b>                            |                                       |                  |                  |                  |                                   |                   |                   |                   |
| Austria.....                              |                                       | 4                | 4                |                  |                                   | 50                | 5 59              |                   |
| Croatia-Slavonia * <sup>7</sup> .....     | 12                                    |                  |                  |                  | 159                               |                   |                   |                   |
| Belgium.....                              | 12                                    |                  |                  |                  | 390                               |                   |                   |                   |
| France.....                               | 4 7 73                                | 33               | 24               |                  | 4 7 1,380                         | 464               | 515               |                   |
| Hungary * <sup>7</sup> .....              | 32                                    |                  |                  |                  | 427                               |                   |                   |                   |
| Italy.....                                |                                       |                  |                  |                  | 3,829                             |                   | 456               | 625               |
| Luxemburg * <sup>8</sup> .....            | 2                                     |                  |                  |                  | 34                                |                   |                   |                   |
| Netherlands.....                          | 65                                    | 88               | 80               |                  | 1,561                             | 2,932             |                   |                   |
| Poland.....                               | 383                                   |                  | 141              | 139              | 5,428                             |                   | 1,802             | 1,796             |
| Rumania.....                              | 42                                    |                  | 16               |                  | 675                               |                   | 247               |                   |
| Russia proper <sup>7</sup> .....          | 2,628                                 |                  |                  |                  | 27,973                            |                   |                   |                   |
| Northern Caucasus <sup>7</sup> .....      | 11                                    |                  |                  |                  | 89                                |                   |                   |                   |
| Spain.....                                | 1,071                                 | 5 941            |                  |                  | 10,402                            | 5 8,143           |                   |                   |
| Sweden.....                               | 47                                    | 89               | 96               | 94               | 1,227                             | 1,854             | 2,127             | 2,094             |
| <b>United Kingdom:</b>                    |                                       |                  |                  |                  |                                   |                   |                   |                   |
| England.....                              | 152                                   | 127              | 132              | 129              | 3,974                             | 3,496             | 3,520             | 3,536             |
| Wales.....                                | 1                                     | 1                | 1                | 1                | 14                                | 15                | 11                | 12                |
| Scotland.....                             | 1                                     |                  | ( <sup>9</sup> ) | ( <sup>9</sup> ) | 14                                | 2                 | 2                 |                   |
| Ireland.....                              |                                       | 10 2             | 10 2             |                  | 8                                 | 12                |                   |                   |
| Total United Kingdom.....                 | 154                                   | 130              | 135              |                  | 4,010                             | 3,525             |                   |                   |
| <b>ASIA.</b>                              |                                       |                  |                  |                  |                                   |                   |                   |                   |
| Japan.....                                | 91                                    | 169              |                  |                  | 1,804                             | 2,736             |                   |                   |
| Russia (9 governments) <sup>7</sup> ..... | 94                                    |                  |                  |                  | 794                               |                   |                   |                   |
| <b>AUSTRALASIA.</b>                       |                                       |                  |                  |                  |                                   |                   |                   |                   |
| Australia.....                            | ( <sup>11</sup> )                     | 10 43            | 57               |                  | ( <sup>11</sup> )                 | 10 744            | 815               |                   |
| New Zealand.....                          | 16                                    |                  | 18               | 14               | 507                               | 313               | 506               | 389               |

<sup>1</sup> Five year average except in a few cases where statistics were unavailable.<sup>2</sup> Not separately stated.<sup>3</sup> Less than 500.<sup>4</sup> Includes chick peas, lentils, and vetches.<sup>5</sup> Unofficial.<sup>6</sup> Includes lentils.<sup>7</sup> Old boundaries.<sup>8</sup> Includes beans and vetches.<sup>9</sup> Former Russian Poland, Western Galicia and Posen.<sup>10</sup> Includes beans.<sup>11</sup> Included under beans.

BROOM CORN.

TABLE 236.—*Broom corn: Acreage, production, and value, by States, 1920 and 1921, and totals, 1915-1921.*

[Leading producing States.]

| State and year. | Acreage. |         | Average yield in pounds per acre. |       | Production (tons). |        | Average farm price per ton Nov. 15. |          | Farm value (thousands of dollars). |       |
|-----------------|----------|---------|-----------------------------------|-------|--------------------|--------|-------------------------------------|----------|------------------------------------|-------|
|                 | 1920     | 1921    | 1920                              | 1921  | 1920               | 1921   | 1920                                | 1921     | 1920                               | 1921  |
| Illinois.....   | 20,000   | 16,000  | 500                               | 550   | 5,000              | 4,400  | \$175.00                            | \$125.00 | 875                                | 550   |
| Missouri.....   | 3,500    | 3,400   | 465                               | 550   | 800                | 900    | 145.00                              | 125.00   | 116                                | 112   |
| Kansas.....     | 20,000   | 10,000  | 375                               | 345   | 3,800              | 1,700  | 89.00                               | 55.00    | 338                                | 94    |
| Texas.....      | 33,000   | 25,000  | 230                               | 310   | 3,800              | 3,900  | 118.00                              | 75.00    | 448                                | 292   |
| Oklahoma.....   | 178,000  | 128,000 | 216                               | 300   | 19,200             | 19,200 | 129.00                              | 64.00    | 2,477                              | 1,229 |
| Colorado.....   | 7,000    | 12,000  | 370                               | 400   | 1,300              | 2,400  | 70.00                               | 45.00    | 91                                 | 108   |
| New Mexico..... | 14,000   | 13,000  | 372                               | 394   | 2,600              | 2,600  | 100.00                              | 65.00    | 260                                | 169   |
| Total.....      | 275,500  | 207,400 | 265.0                             | 338.4 | 36,500             | 35,100 | 126.16                              | 72.76    | 4,603                              | 2,554 |
| 1919.....       | 352,000  |         | 303.4                             |       | 53,400             |        | 154.57                              |          | 8,254                              |       |
| 1918.....       | 366,000  |         | 340.4                             |       | 62,300             |        | 233.87                              |          | 14,570                             |       |
| 1917.....       | 345,000  |         | 332.8                             |       | 57,400             |        | 292.75                              |          | 16,804                             |       |
| 1916.....       | 235,200  |         | 329.3                             |       | 38,726             |        | 172.75                              |          | 6,690                              |       |
| 1915.....       | 230,100  |         | 454.1                             |       | 52,242             |        | 91.67                               |          | 4,789                              |       |

TABLE 237.—*Broom corn: Farm price per ton on 15th of each month, 1910-1921.*

| Year.     | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. |
|-----------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|
| 1910..... | \$190    | \$197    | \$200    | \$204    | \$199   | \$151    | \$180    | \$142    | \$139     | \$108    | \$96     | \$93     |
| 1911..... | 81       | 80       | 78       | 74       | 81      | 69       | 68       | 72       | 92        | 121      | 124      | 108      |
| 1912..... | 100      | 86       | 99       | 101      | 83      | 79       | 85       | 83       | 77        | 70       | 69       | 57       |
| 1913..... | 49       | 56       | 57       | 58       | 53      | 61       | 57       | 91       | 106       | 102      | 100      | 92       |
| 1914..... | 94       | 95       | 91       | 89       | 85      | 88       | 88       | 91       | 77        | 67       | 66       | 59       |
| 1915..... | 66       | 78       | 68       | 71       | 75      | 77       | 79       | 83       | 75        | 86       | 92       | 101      |
| 1916..... | 104      | 104      | 104      | 96       | 101     | 102      | 103      | 120      | 129       | 168      | 173      | 172      |
| 1917..... | 184      | 201      | 212      | 227      | 232     | 223      | 194      | 308      | 240       | 270      | 296      | 280      |
| 1918..... | 249      | 254      | 242      | 222      | 206     | 222      | 235      | 232      | 300       | 265      | 205      | 172      |
| 1919..... | 169      | 141      | 174      | 149      | 152     | 106      | 119      | 124      | 154       | 162      | 161      | 163      |
| 1920..... | 163      | 123      | 130      | 145      | 146     | 145      | 113      | 142      | 125       | 126      | 123      | 89       |
| 1921..... | 70       | 71       | 72       | 69       | 66      | 76       | 75       | 67       | 68        | 72       | 68       | 56       |

TABLE 238.—*Broom corn: Forecasts of production, monthly, with preliminary and final estimates.*

| Year.     | July.  | August. | September. | October production estimate. | Final estimate. |
|-----------|--------|---------|------------|------------------------------|-----------------|
|           | Tons.  | Tons.   | Tons.      | Tons.                        | Tons.           |
| 1917..... | 55,310 |         | 59,300     | 50,100                       | 57,400          |
| 1918..... | 70,500 | 62,900  | 56,100     | 52,100                       | 57,800          |
| 1919..... | 56,500 | 59,100  | 60,300     | 55,500                       | 53,400          |
| 1920..... | 43,400 | 45,400  | 45,500     | 37,000                       | 36,500          |
| 1921..... | 32,200 | 32,700  | 33,100     | 30,200                       | 35,100          |

\* Preliminary.



GRAIN SORGHUMS.<sup>1</sup>TABLE 239.—*Grain sorghums: Acreage, production, and value, by States, 1920 and 1921, and totals, 1915-1921.*

[Leading producing States.]

| State and year. | Thousands of acres. |       | Average yield in bushels per acre. |      | Production (thousands of bushels). |         | Average farm price, cents per bushel Nov. 15. |      | Farm value (thousands of dollars). |        |
|-----------------|---------------------|-------|------------------------------------|------|------------------------------------|---------|---|------|------------------------------------|--------|
|                 | 1920                | 1921  | 1920                               | 1921 | 1920                               | 1921    | 1920  | 1921 | 1920                               | 1921   |
| Iowa.....       | 29                  | 26    | 23.0                               | 20.0 | 667                                | 780     | 115.0   | 70.0 | 767                                | 546    |
| Missouri.....   | 12                  | 12    | 30.0                               | 23.0 | 360                                | 276     | 180.0   | 80.0 | 576                                | 221    |
| Nebraska.....   | 17                  | 15    | 21.0                               | 22.0 | 357                                | 330     | 100.0   | 40.0 | 357                                | 132    |
| Kansas.....     | 1,194               | 858   | 22.3                               | 21.4 | 26,626                             | 18,361  | 69.0  | 34.0 | 18,372                             | 6,243  |
| Texas.....      | 1,908               | 1,950 | 32.0                               | 29.0 | 60,982                             | 56,550  | 121.0   | 41.0 | 73,800                             | 22,186 |
| Oklahoma.....   | 1,350               | 1,240 | 26.0                               | 21.0 | 35,100                             | 26,040  | 60.0  | 30.0 | 21,060                             | 7,812  |
| Colorado.....   | 282                 | 237   | 17.0                               | 16.5 | 4,794                              | 3,910   | 84.0  | 52.0 | 4,027                              | 2,033  |
| New Mexico..... | 156                 | 134   | 24.6                               | 24.8 | 3,838                              | 3,323   | 99.0  | 40.0 | 3,800                              | 1,329  |
| Arizona.....    | 24                  | 40    | 26.0                               | 30.0 | 624                                | 1,200   | 99.0  | 60.0 | 618                                | 720    |
| California..... | 150                 | 140   | 27.0                               | 31.0 | 4,050                              | 4,340   | 105.0   | 70.0 | 4,252                              | 3,038  |
| Total.....      | 5,120               | 4,652 | 26.8                               | 24.7 | 137,408                            | 115,110 | 92.9  | 39.3 | 127,629                            | 45,260 |
| 1919.....       | 5,080               |       | 25.8                               |      | 130,734                            |         | 127.4   |      | 166,519                            |        |
| 1918.....       | 6,036               |       | 12.1                               |      | 73,241                             |         | 150.0   |      | 109,881                            |        |
| 1917.....       | 5,153               |       | 11.9                               |      | 61,409                             |         | 161.9   |      | 99,423                             |        |
| 1916.....       | 3,944               |       | 13.7                               |      | 53,858                             |         | 105.9   |      | 57,027                             |        |
| 1915.....       | 4,153               |       | 27.6                               |      | 114,460                            |         | 44.7  |      | 51,157                             |        |

<sup>1</sup> Kafirs, milo maize, feterita.TABLE 240.—*Grain sorghums: Forecasts of production, monthly, with preliminary and final estimates.*

[000 omitted.]

| Year.     | July.           | August.         | September.      | October.        | November production estimate. | Final estimate.      |
|-----------|-----------------|-----------------|-----------------|-----------------|-------------------------------|----------------------|
|           | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i> | <i>Bushels.</i>               | <i>Bushels.</i>      |
| 1916..... |                 | 89,474          | 74,662          | 78,135          | 61,024                        | 53,858               |
| 1917..... | 94,516          | 83,198          | 102,938         | 96,609          | 73,380                        | 61,409               |
| 1918..... | 110,005         | 95,441          | 74,211          | 73,650          | 61,182                        | 73,241               |
| 1919..... | 123,504         | 130,153         | 129,509         | 127,053         | 128,343                       | 130,734              |
| 1920..... | 123,750         | 125,924         | 133,964         | 139,503         | 148,747                       | <sup>1</sup> 137,408 |
| 1921..... | 124,733         | 129,602         | 126,967         | 127,930         | 125,724                       | <sup>1</sup> 115,110 |

<sup>1</sup> Preliminary.TABLE 241.—*Grain sorghums: Farm price, cents per bushel, on 15th of month, 1915-1921.*

| Year.     | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. |
|-----------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|
| 1916..... |          |          |          | 53.6     | 53.2    | 60.0     | 62.8     | 72.4     | 83.8      | 80.8     | 102.4    | 101.5    |
| 1917..... | 119.1    | 129.0    | 147.0    | 152.0    | 188.0   | 206.3    | 214.0    | 243.3    | 187.7     | 174.1    | 160.6    | 166.7    |
| 1918..... | 170.8    | 185.7    | 193.5    | 204.0    | 211.0   | 179.6    | 165.6    | 177.2    | 181.0     | 175.9    | 150.5    | 151.8    |
| 1919..... | 153.7    | 156.9    | 150.9    | 162.1    | 173.6   | 174.1    | 175.6    | 176.9    | 158.7     | 139.7    | 133.6    | 144.3    |
| 1920..... | 137.3    | 138.7    | 129.8    | 145.4    | 154.5   | 153.9    | 135.2    | 180.0    | 124.8     | 95.5     | 91.5     | 81.7     |
| 1921..... | 65.6     | 57.8     | 67.3     | 53.8     | 51.5    | 62.0     | 51.0     | 58.0     | 54.9      | 43.3     | 35.8     | 33.8     |

## GRAIN SORGHUMS—Continued.

TABLE 242.—Grain sorghums: Monthly and yearly average price per 100 pounds, No. 2 white, kafir, Kansas City, 1910-11 to 1921-22.<sup>1</sup>

| Crop year.        | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Average. |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910-11.....      | \$1.12 | \$0.96 | \$0.96 | \$0.93 | \$0.94 | \$0.94 | \$1.06 | \$1.24 | \$1.42 | \$1.34 | \$1.27 | \$1.21 | \$1.12   |
| 1911-12.....      | 1.06   | .99    | 1.19   | (?)    | 1.29   | 1.43   | 1.44   | 1.23   | 1.63   | 1.63   | 1.36   | 1.13   | 1.31     |
| 1912-13.....      | .98    | .86    | .85    | .83    | .81    | .82    | .88    | 1.11   | 1.09   | 1.41   | 1.53   | 1.51   | 1.05     |
| 1913-14.....      | 1.57   | 1.63   | 1.72   | 1.72   | 1.76   | (?)    | 2.00   | (?)    | (?)    | (?)    | (?)    | (?)    | 1.74     |
| 1914-15.....      | 1.04   | 1.14   | 1.33   | 1.38   | 1.23   | 1.18   | 1.14   | 1.20   | 1.16   | 1.09   | 1.04   | 1.06   | 1.17     |
| 1915-16.....      | .91    | .99    | .99    | .96    | .93    | 1.06   | 1.05   | 1.11   | 1.22   | 1.58   | 1.71   | 1.84   | 1.19     |
| 1916-17.....      | 2.34   | 2.11   | 2.43   | 2.48   | 2.66   | 3.17   | 3.79   | 3.36   | 4.00   | 4.48   | 4.34   | 3.69   | 3.24     |
| 1917-18.....      | 3.40   | 3.25   | 3.33   | 3.69   | 3.84   | 3.37   | 2.83   | 2.65   | 3.03   | 3.40   | 3.40   | 3.27   | 3.28     |
| 1918-19.....      | 2.96   | 2.61   | 2.69   | 2.70   | 2.56   | 2.67   | 2.97   | 3.42   | 3.51   | 3.61   | 2.41   | 2.34   | 2.86     |
| 1919-20.....      | 2.67   | 2.93   | 2.49   | 2.17   | 2.31   | 2.38   | 2.65   | 2.52   | 2.36   | 2.43   | 2.24   | 1.81   | 2.41     |
| 1920-21.....      | 1.39   | 1.17   | .98    | .91    | .85    | .80    | 1.03   | 1.12   | 1.21   | 1.13   | 1.13   | 1.02   | 1.06     |
| 1921-22.....      | .85    | .90    |        |        |        |        |        |        |        |        |        |        |          |
| 11-year average.. | 1.77   | 1.69   | 1.72   | 1.78   | 1.75   | 1.78   | 1.90   | 1.90   | 2.06   | 2.22   | 2.04   | 1.89   | 1.97     |

<sup>1</sup> Compiled from Kansas City Price Current and Grain Market Review.<sup>2</sup> No quotations.

## PEANUTS.

TABLE 243.—Peanuts: Acreage, production, and value, by States, 1920 and 1921.

| State and year.     | Acreage.  |       | Average yield in pounds per acre. |       | Production (thousands of pounds). |         | Average farm price, cents per pound Nov. 15. |      | Farm value (thousands of dollars). |        |
|---------------------|-----------|-------|-----------------------------------|-------|-----------------------------------|---------|--|------|------------------------------------|--------|
|                     | 1920      | 1921  | 1920                              | 1921  | 1920                              | 1921    | 1920   | 1921 | 1920                               | 1921   |
| Virginia.....       | 133       | 149   | 830                               | 732   | 110,390                           | 109,063 | 5.5  | 5.8  | 6,071                              | 6,326  |
| North Carolina..... | 126       | 141   | 1,011                             | 919   | 127,386                           | 129,579 | 5.6  | 5.6  | 7,134                              | 7,256  |
| South Carolina..... | 31        | 38    | 950                               | 875   | 29,450                            | 33,250  | 8.0  | 4.0  | 2,356                              | 1,330  |
| Georgia.....        | 224       | 202   | 718                               | 660   | 160,832                           | 133,320 | 5.0  | 2.5  | 8,042                              | 3,333  |
| Florida.....        | 90        | 80    | 625                               | 675   | 56,250                            | 54,000  | 6.0  | 3.2  | 3,375                              | 1,723  |
| Tennessee.....      | 6         | 9     | 851                               | 943   | 5,106                             | 8,487   | 7.0  | 5.0  | 357                                | 424    |
| Alabama.....        | 334       | 330   | 550                               | 550   | 183,700                           | 181,500 | 3.5  | 2.8  | 6,430                              | 5,082  |
| Mississippi.....    | 17        | 19    | 600                               | 650   | 10,200                            | 12,350  | 7.0  | 6.0  | 714                                | 741    |
| Louisiana.....      | 18        | 18    | 600                               | 487   | 10,800                            | 8,766   | 5.5  | 6.0  | 594                                | 526    |
| Texas.....          | 174       | 195   | 720                               | 635   | 125,280                           | 123,825 | 6.0  | 3.4  | 7,517                              | 4,210  |
| Oklahoma.....       | 12        | 15    | 840                               | 720   | 10,080                            | 10,800  | 7.0  | 7.0  | 706                                | 756    |
| Arkansas.....       | 16        | 16    | 750                               | 720   | 12,000                            | 11,520  | 8.0  | 5.0  | 960                                | 576    |
| Total.....          | 1,181     | 1,212 | 712.5                             | 673.7 | 841,474                           | 816,465 | 5.3  | 4.0  | 44,256                             | 32,283 |
| 1919.....           | 1,132,400 |       | 691.9                             |       | 783,273                           |         | 9.3  |      | 73,094                             |        |
| 1918.....           | 1,805,000 |       | 881.1                             |       | 919,028                           |         | 4.5  |      | 41,245                             |        |
| 1917.....           | 1,842,000 |       | 777.7                             |       | 1,432,581                         |         | 6.9  |      | 98,512                             |        |
| 1916.....           | 1,043,000 |       | 664.9                             |       | 1,240,103                         |         | 6.5  |      | 80,271                             |        |

TABLE 244.—Peanuts: Farm price, cents per pound on 15th of each month, 1910-1921.

| Year.     | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. |
|-----------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|
| 1910..... | 4.9      | 5.4      | 5.0      | 5.4      | 5.2     | 5.4      | 5.2      | 4.5      | 4.5       | 4.6      | 4.7      | 4.5      |
| 1911..... | 4.4      | 5.0      | 4.8      | 4.9      | 4.8     | 5.2      | 5.0      | 5.3      | 5.1       | 4.6      | 4.4      | 4.4      |
| 1912..... | 4.3      | 4.7      | 5.0      | 4.9      | 4.9     | 5.2      | 4.9      | 5.0      | 4.8       | 4.7      | 4.7      | 4.6      |
| 1913..... | 4.6      | 4.5      | 4.7      | 4.8      | 4.7     | 5.0      | 5.1      | 4.9      | 4.9       | 4.8      | 4.4      | 4.8      |
| 1914..... | 4.7      | 4.7      | 4.7      | 4.9      | 5.1     | 5.1      | 5.2      | 4.9      | 5.0       | 4.5      | 4.4      | 4.3      |
| 1915..... | 4.5      | 4.4      | 4.2      | 4.5      | 4.8     | 4.8      | 4.7      | 4.5      | 4.4       | 4.3      | 4.2      | 4.2      |
| 1916..... | 4.3      | 4.4      | 4.4      | 4.6      | 4.6     | 4.7      | 4.6      | 4.6      | 4.4       | 4.4      | 4.4      | 4.7      |
| 1917..... | 4.9      | 5.3      | 5.5      | 6.2      | 7.2     | 7.7      | 7.6      | 7.2      | 6.6       | 6.1      | 7.1      | 7.1      |
| 1918..... | 7.0      | 7.2      | 7.4      | 8.3      | 8.2     | 7.9      | 7.8      | 7.9      | 8.3       | 6.9      | 6.6      | 8.1      |
| 1919..... | 6.0      | 6.9      | 7.0      | 6.9      | 7.2     | 7.7      | 8.2      | 8.1      | 8.3       | 8.1      | 9.1      | 9.1      |
| 1920..... | 9.9      | 10.5     | 11.2     | 10.9     | 11.2    | 11.2     | 11.0     | 8.5      | 8.0       | 5.8      | 5.3      | 4.7      |
| 1921..... | 4.4      | 4.1      | 4.0      | 3.5      | 3.4     | 3.8      | 3.3      | 3.9      | 4.0       | 4.0      | 3.7      | 3.5      |

## PEANUTS—Continued.

TABLE 245.—Peanuts, unshelled, international trade, calendar years 1911–1920.

Includes shelled and unshelled, assuming the peanuts to be unshelled unless otherwise stated. When shelled nuts were reported they have been reduced to terms of unshelled at the ratio of 3 pounds unshelled to 2 pounds shelled.

[In thousands of pounds.]

| Year.     | Algeria. |          | Anglo-Egyptian Sudan. |          | Argentina. |          | Belgium. |          | Brazil, exports. | British India, exports. |
|-----------|----------|----------|-----------------------|----------|------------|----------|----------|----------|------------------|-------------------------|
|           | Imports. | Exports. | Imports.              | Exports. | Imports.   | Exports. | Imports. | Exports. |                  |                         |
| 1911..... | 7,352    | 188      | .....                 | 2,476    | 9,046      | .....    | 79,027   | 53,088   | 363              | 450,275                 |
| 1912..... | 6,558    | 209      | .....                 | 1,820    | 8,967      | .....    | 57,817   | 38,698   | 383              | 458,722                 |
| 1913..... | 7,124    | 253      | .....                 | 1,586    | 7,967      | .....    | .....    | .....    | 77               | 571,849                 |
| 1914..... | 6,759    | 312      | 5                     | 1,459    | 4,687      | 48       | .....    | .....    | 93               | 586,645                 |
| 1915..... | .....    | .....    | 40                    | 1,060    | 490        | 16       | .....    | .....    | 151              | 280,299                 |
| 1916..... | .....    | 173      | 1                     | 2,281    | 493        | 71       | .....    | .....    | 479              | 388,304                 |
| 1917..... | .....    | 1,204    | .....                 | 6,473    | 1,459      | 36       | .....    | .....    | 2,630            | 290,173                 |
| 1918..... | .....    | 32       | .....                 | 5,836    | 1,066      | 185      | .....    | .....    | 2,002            | 111,444                 |
| 1919..... | .....    | 42       | .....                 | 7,476    | .....      | 2,620    | .....    | .....    | 450              | 129,342                 |
| 1920..... | .....    | 87       | .....                 | 6,270    | .....      | .....    | .....    | .....    | 1,975            | 271,358                 |

| Year.     | Canada, imports. | China.   |          | Denmark, imports. | Dutch East Indies. |          | Egypt.   |          | Formosa. |          |
|-----------|------------------|----------|----------|-------------------|--------------------|----------|----------|----------|----------|----------|
|           |                  | Imports. | Exports. |                   | Imports.           | Exports. | Imports. | Exports. | Imports. | Exports. |
| 1911..... | 16,072           | 19,949   | 143,186  | 4,620             | 375                | 70,487   | 4,548    | 1,933    | .....    | 3        |
| 1912..... | 17,212           | 34,128   | 114,234  | 2,629             | 1,004              | 58,987   | 4,191    | 1,750    | .....    | 114      |
| 1913..... | 18,622           | 44,568   | 157,987  | 8,459             | 457                | 51,401   | 5,253    | 1,228    | .....    | 91       |
| 1914..... | 18,872           | 26,885   | 185,369  | 9,638             | 436                | 47,862   | 3,615    | 652      | .....    | 27       |
| 1915..... | 16,952           | 27,086   | 57,509   | 21,076            | 655                | 34,262   | 581      | 359      | .....    | 284      |
| 1916..... | 110,160          | 23,679   | 113,896  | 21,972            | 1,070              | 28,042   | 584      | 2,167    | 552      | 96       |
| 1917..... | 14,217           | 57,934   | 87,419   | 44                | 758                | 30,833   | 194      | 5,401    | 196      | 20       |
| 1918..... | 16,669           | 93,628   | 103,238  | .....             | 444                | 23,367   | 7        | 2,387    | 87       | 167      |
| 1919..... | 15,736           | 23,970   | 251,295  | 18,207            | 473                | 47,787   | 672      | 5,709    | 10       | 2,140    |
| 1920..... | 20,134           | 26,159   | 246,343  | 10,811            | .....              | .....    | .....    | .....    | .....    | .....    |

| Year.     | France.   |          | French possessions in India, exports. | Gambia, exports. | Germany. |          | Guinea (French). |          | Guinea (Portuguese), exports. |
|-----------|-----------|----------|---------------------------------------|------------------|----------|----------|------------------|----------|-------------------------------|
|           | Imports.  | Exports. |                                       |                  | Imports. | Exports. | Imports.         | Exports. |                               |
| 1911..... | 1,067,774 | 47,782   | 274,218                               | 105,669          | 154,636  | 98       | (*)              | 2,328    | 14,610                        |
| 1912..... | 1,301,230 | 45,813   | 295,131                               | 141,467          | 154,084  | .....    | 1                | 4,453    | 24,746                        |
| 1913..... | 1,349,974 | 44,727   | 350,755                               | 148,599          | 216,239  | .....    | (*)              | 7,907    | 24,529                        |
| 1914..... | 1,487,917 | 33,949   | .....                                 | 147,456          | .....    | .....    | .....            | 7,331    | .....                         |
| 1915..... | 1,026,510 | 29,621   | .....                                 | 211,977          | .....    | .....    | .....            | 2,790    | .....                         |
| 1916..... | 1,046,574 | 10,500   | .....                                 | 102,218          | .....    | .....    | .....            | 1,705    | .....                         |
| 1917..... | 644,423   | 1,435    | .....                                 | 163,802          | .....    | .....    | .....            | 1,764    | .....                         |
| 1918..... | 194,613   | 805      | .....                                 | .....            | .....    | .....    | .....            | 753      | .....                         |
| 1919..... | 591,058   | 2,138    | 80,675                                | .....            | .....    | .....    | .....            | 2,922    | .....                         |
| 1920..... | 1,062,099 | 5,707    | .....                                 | .....            | 21,939   | .....    | .....            | .....    | .....                         |

| Year.     | Hong Kong. |          | Italy, imports. | Japan.   |          | Mozambique. |          | Netherlands. |          | Nigeria, exports. |
|-----------|------------|----------|-----------------|----------|----------|-------------|----------|--------------|----------|-------------------|
|           | Imports.   | Exports. |                 | Imports. | Exports. | Imports.    | Exports. | Imports.     | Exports. |                   |
| 1911..... | .....      | .....    | .....           | 10,315   | .....    | .....       | .....    | 104,899      | 28,135   | 4,601             |
| 1912..... | .....      | .....    | .....           | 8,641    | .....    | 866         | 19,117   | 115,035      | 28,206   | 9,434             |
| 1913..... | .....      | .....    | .....           | 13,069   | .....    | 1,331       | 12,697   | 148,652      | 42,248   | * 43,205          |
| 1914..... | .....      | .....    | .....           | 12,250   | .....    | 416         | 16,886   | 141,464      | 47,840   | 38,073            |
| 1915..... | .....      | .....    | .....           | 1,902    | 12,303   | 142         | 23,609   | 102,776      | 16,646   | 19,953            |
| 1916..... | .....      | .....    | .....           | 4,263    | 15,463   | 38          | 15,853   | 42,061       | 95       | 112,824           |
| 1917..... | .....      | .....    | .....           | 3,748    | 18,776   | 124         | 29,329   | 21,669       | (*)      | 112,748           |
| 1918..... | 140,951    | 106,789  | .....           | 14,173   | 18,855   | 63          | 15,039   | 175          | .....    | .....             |
| 1919..... | 56,545     | 38,693   | 7,135           | 25,131   | 14,587   | .....       | .....    | 48,915       | 247      | .....             |
| 1920..... | .....      | .....    | 31,045          | 43,824   | 11,928   | .....       | .....    | 52,946       | 1,165    | .....             |

\* Includes some unshelled pecans.

\* Less than 500 pounds.

\* Colony and Protectorate of Southern Nigeria.

PEANUTS—Continued.

TABLE 245.—Peanuts, unshelled, international trade, calendar years 1911–1920—Contd.

| Year.     | Perak, imports. | Philip-pine Islands, imports. | Selangor, imports. | Senegal. |          | Singapore. |          | Spain, exports. | Tunis, imports. | Uganda, exports. |
|-----------|-----------------|-------------------------------|--------------------|----------|----------|------------|----------|-----------------|-----------------|------------------|
|           |                 |                               |                    | Imports. | Exports. | Imports.   | Exports. |                 |                 |                  |
| 1911..... | 1,442           | 1,857                         | 1,928              | (1)      | 363,556  | 16,474     | 9,622    | 7,540           | .....           | 791              |
| 1912..... | 1,772           | 2,400                         | 2,196              | .....    | 407,328  | 23,710     | 14,760   | 8,249           | 2,037           | 1,024            |
| 1913..... | 1,662           | 2,583                         | 1,834              | 337      | 506,928  | .....      | .....    | 11,827          | 882             | 1,319            |
| 1914..... | 1,457           | 2,681                         | 1,535              | .....    | 618,449  | .....      | .....    | 5,613           | 1,145           | 880              |
| 1915..... | 1,337           | 2,210                         | 1,159              | .....    | 668,142  | .....      | .....    | 7,863           | 1,107           | 18               |
| 1916..... | .....           | 2,445                         | .....              | .....    | 273,684  | .....      | .....    | 7,160           | 883             | 190              |
| 1917..... | .....           | 2,447                         | .....              | .....    | 387,192  | .....      | .....    | 6,840           | 262             | 408              |
| 1918..... | .....           | 2,200                         | .....              | .....    | 279,958  | 69,996     | 51,193   | 2,431           | 312             | 108              |
| 1919..... | .....           | 2,284                         | .....              | .....    | 629,355  | .....      | .....    | 10,377          | 597             | .....            |
| 1920..... | 901             | 3,241                         | .....              | 795      | .....    | 15,320     | 6,517    | 5,058           | 1,138           | .....            |

| Year.     | British South Africa. |          | United Kingdom, imports. | United States. |          | Upper Senegal and Niger, exports. | Other countries. |          | Total.    |           |
|-----------|-----------------------|----------|--------------------------|----------------|----------|-----------------------------------|------------------|----------|-----------|-----------|
|           | Imports.              | Exports. |                          | Imports.       | Exports. |                                   | Imports.         | Exports. | Imports.  | Exports.  |
| 1911..... | 2,422                 | 2        | (3)                      | 19,179         | 5,557    | 11,268                            | 8,694            | 9,255    | 1,510,294 | 1,617,316 |
| 1912..... | 3,977                 | 2        | (3)                      | 14,304         | 7,146    | 12,554                            | 8,172            | 16,171   | 1,752,270 | 1,747,509 |
| 1913..... | 2,608                 | 8        | (3)                      | 29,481         | 7,710    | 18,909                            | 2,529            | 21,082   | 1,840,532 | 2,039,406 |
| 1914..... | 2,677                 | 208      | (3)                      | 59,105         | 6,737    | 6,494                             | 1,722            | 2,224    | 1,761,336 | 1,775,173 |
| 1915..... | 3,208                 | 176      | (3)                      | 27,830         | 6,493    | .....                             | 1,664            | 282      | 1,226,725 | 1,412,818 |
| 1916..... | 4,184                 | 19       | (3)                      | 34,251         | 18,375   | .....                             | 1,810            | 578      | 1,195,020 | 1,093,613 |
| 1917..... | 3,088                 | 5        | 305,509                  | 71,556         | 12,891   | .....                             | 1,597            | 598      | 1,129,230 | 1,159,977 |
| 1918..... | 3,508                 | 56       | 304,120                  | 103,591        | 12,319   | .....                             | 802              | 224      | 876,299   | 737,188   |
| 1919..... | 751                   | 324      | 238,755                  | 41,937         | 19,778   | .....                             | 540              | 818      | 1,072,998 | 1,246,676 |
| 1920..... | 1,896                 | 58       | 275,126                  | 174,919        | 9,366    | .....                             | 235              | 66       | 1,742,523 | 565,898   |

<sup>1</sup> Less than 500 pounds.

<sup>2</sup> Included in "Nuts and kernels for expressing oil, other sorts."

TRUCK CROPS.

TABLE 246.—Commercial acreage and production of truck crops in the United States, 1918–1921.

| Crop.                           | Number of States producing. | Acreage. |         |         |         | Production. |            |            |            |
|---------------------------------|-----------------------------|----------|---------|---------|---------|-------------|------------|------------|------------|
|                                 |                             | 1918     | 1919    | 1920    | 1921    | 1918        | 1919       | 1920       | 1921       |
| Asparagus.....crts..            | 12                          | 30,431   | 28,280  | 31,419  | 32,820  | 2,239,200   | 2,040,600  | 2,482,800  | 3,460,800  |
| Beans (snap).....tons..         | 36                          | 51,090   | 59,261  | 57,400  | 53,375  | 168,230     | 106,788    | 114,584    | 100,657    |
| Cabbage.....tons..              | 25                          | 92,230   | 87,497  | 115,838 | 94,085  | 682,138     | 587,838    | 1,029,662  | 606,275    |
| Cantaloupes.....crts..          | 23                          | 55,281   | 77,445  | 81,127  | 80,418  | 8,550,150   | 13,049,059 | 12,493,600 | 12,531,050 |
| Cauliflower.....crts..          | 5                           | 5,863    | 6,596   | 8,502   | 8,712   | 1,526,600   | 1,714,800  | 2,272,800  | 2,347,600  |
| Celery.....crts..               | 8                           | 12,885   | 14,012  | 16,260  | 14,903  | 2,525,580   | 2,906,290  | 3,707,100  | 3,307,140  |
| Corn (sweet).....tons..         | 20                          | 279,536  | 245,735 | 243,031 | 118,810 | 494,858     | 525,632    | 496,101    | 314,176    |
| Cucumbers.....crts..            | 30                          | 53,787   | 74,187  | 74,498  | 89,167  | 7,707,000   | 8,050,960  | 6,737,000  | 10,053,000 |
| Lettuce.....crts..              | 13                          | 17,041   | 15,766  | 31,903  | 30,234  | 5,031,316   | 5,318,468  | 9,023,752  | 9,479,558  |
| Onions.....bu..                 | 22                          | 64,690   | 53,046  | 64,650  | 55,829  | 19,329,500  | 14,202,000 | 23,435,000 | 12,652,000 |
| Peas.....tons..                 | 27                          | 148,116  | 155,046 | 158,101 | 137,588 | 150,147     | 130,306    | 184,204    | 110,520    |
| Potatoes (early Irish).....bu.. | 17                          | 266,122  | 202,618 | 246,650 | 240,708 | 24,667,000  | 19,484,500 | 27,026,500 | 24,945,000 |
| Strawberries.....crts..         | 27                          | 100,146  | 83,162  | 89,377  | 104,817 | 6,312,600   | 6,378,300  | 6,101,550  | 7,838,100  |
| Tomatoes.....tons..             | 38                          | 478,813  | 377,748 | 361,915 | 204,076 | 1,977,358   | 1,386,460  | 1,647,707  | 976,002    |
| Watermelons.....do..            | 18                          | 70,595   | 126,445 | 152,669 | 153,877 | 28,600,000  | 43,224,000 | 62,992,000 | 61,917,000 |

## CABBAGE.

TABLE 247.—Commercial acreage, yield per acre, and production of cabbages in the United States, 1919-1921.

| State.               | Acreage harvested. |               |               | Yield per acre. |              |              | Production in cars—<br>25,000 pounds. |              |              |
|----------------------|--------------------|---------------|---------------|-----------------|--------------|--------------|---------------------------------------|--------------|--------------|
|                      | 1919               | 1920          | 1921          | 1919            | 1920         | 1921         | 1919                                  | 1920         | 1921         |
| Early:               | <i>Acres.</i>      | <i>Acres.</i> | <i>Acres.</i> | <i>Tons.</i>    | <i>Tons.</i> | <i>Tons.</i> | <i>Cars.</i>                          | <i>Cars.</i> | <i>Cars.</i> |
| California.....      | 6,055              | 9,050         | 7,129         | 4.0             | 7.1          | 7.0          | 1,933                                 | 5,140        | 3,992        |
| Florida.....         | 4,417              | 9,285         | 5,267         | 6.0             | 6.8          | 6.0          | 2,120                                 | 5,051        | 2,528        |
| Louisiana.....       | 1,574              | 1,605         | 1,535         | 4.0             | 3.2          | 6.4          | 504                                   | 1,063        | 812          |
| Texas.....           | 4,615              | 16,250        | 11,210        | 5.0             | 4.8          | 4.0          | 1,946                                 | 6,240        | 3,537        |
| Late:                |                    |               |               |                 |              |              |                                       |              |              |
| Alabama.....         | 810                | 985           | 1,000         | 7.0             | 7.8          | 7.0          | 454                                   | 615          | 560          |
| Colorado.....        | 4,003              | 4,390         | 3,995         | 10.0            | 15.1         | 11.7         | 3,202                                 | 5,303        | 3,736        |
| Illinois.....        | 1,515              | 1,605         | 1,325         | 5.0             | 8.1          | 5.0          | 806                                   | 1,040        | 536          |
| Indiana.....         | 1,232              | 1,240         | 1,090         | 6.3             | 9.8          | 6.0          | 621                                   | 972          | 523          |
| Iowa.....            | 740                | 1,030         | 575           | 4.5             | 8.0          | 5.0          | 266                                   | 640          | 230          |
| Kentucky.....        | 348                | 350           | 350           | 8.6             | 6.6          | 6.0          | 239                                   | 185          | 168          |
| Maryland.....        | 2,072              | 2,135         | 2,055         | 8.0             | 5.8          | 4.8          | 1,326                                 | 1,014        | 789          |
| Michigan.....        | 2,069              | 1,970         | 1,365         | 6.8             | 10.7         | 6.5          | 1,126                                 | 1,686        | 710          |
| Minnesota.....       | 2,845              | 2,918         | 2,521         | 8.0             | 8.9          | 5.0          | 1,821                                 | 2,073        | 1,003        |
| Mississippi.....     | 1,608              | 1,780         | 1,315         | 5.5             | 8.4          | 4.8          | 708                                   | 1,183        | 505          |
| Missouri.....        | 694                | 725           | 700           | 8.0             | 8.0          | 8.1          | 444                                   | 464          | 454          |
| New Jersey.....      | 3,895              | 4,522         | 4,220         | 7.5             | 8.1          | 6.5          | 2,337                                 | 2,930        | 2,194        |
| New York.....        | 22,530             | 25,472        | 21,360        | 6.5             | 11.6         | 6.5          | 11,716                                | 23,638       | 11,367       |
| Ohio.....            | 2,354              | 2,895         | 2,168         | 7.0             | 9.9          | 6.0          | 1,313                                 | 2,285        | 1,041        |
| Oregon.....          | 775                | 829           | 775           | 11.0            | 7.7          | 9.5          | 682                                   | 505          | 589          |
| Pennsylvania.....    | 2,709              | 2,865         | 2,680         | 8.0             | 10.3         | 6.0          | 1,728                                 | 2,361        | 1,283        |
| South Carolina.....  | 2,023              | 1,993         | 3,425         | 7.5             | 7.4          | 9.7          | 1,214                                 | 1,180        | 2,653        |
| Tennessee.....       | 624                | 575           | 655           | 6.0             | 4.0          | 6.1          | 300                                   | 184          | 320          |
| Virginia:            |                    |               |               |                 |              |              |                                       |              |              |
| Eastern Shore and    |                    |               |               |                 |              |              |                                       |              |              |
| Norfolk section..... | 2,587              | 2,840         | 3,195         | 6.5             | 5.8          | 8.8          | 1,345                                 | 1,318        | 2,249        |
| Southwestern.....    | 2,205              | 2,575         | 2,500         | 7.5             | 12.2         | 6.0          | 1,324                                 | 2,513        | 1,200        |
| Washington.....      | 1,051              | 1,026         | 920           | 10.0            | 10.2         | 8.9          | 841                                   | 837          | 589          |
| Wisconsin.....       | 12,155             | 14,947        | 10,155        | 7.2             | 10.0         | 6.0          | 7,001                                 | 11,958       | 4,874        |

TABLE 248.—Cabbage: Farm price per 100 pounds on 15th of each month, 1910-1921.

| Year.     | Jan.<br>15. | Feb.<br>15. | Mar.<br>15. | Apr.<br>15. | May<br>15. | June<br>15. | July<br>15. | Aug.<br>15. | Sept.<br>15. | Oct.<br>15. | Nov.<br>15. | Dec.<br>15. |
|-----------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| 1910..... | \$1.87      | \$2.05      | \$2.14      | \$2.29      | \$2.77     | \$2.19      | \$2.27      | \$1.89      | \$1.94       | \$1.58      | \$1.36      | \$1.49      |
| 1911..... | 1.56        | 1.43        | 1.26        | 1.33        | 1.33       | 2.46        | 2.93        | 2.47        | 1.94         | 1.53        | 1.51        | 1.83        |
| 1912..... | 1.89        | 2.24        | 2.88        | 3.17        | 2.98       | 2.67        | 2.29        | 1.88        | 1.25         | 1.08        | 1.04        | 1.15        |
| 1913..... | 1.26        | 1.17        | 1.03        | 1.15        | 1.53       | 2.18        | 2.64        | 2.15        | 1.79         | 1.69        | 1.53        | 1.75        |
| 1914..... | 1.87        | 2.07        | 2.03        | 2.24        | 2.05       | 2.61        | 2.66        | 1.74        | 1.50         | 1.31        | 1.14        | 1.23        |
| 1915..... | 1.36        | 1.41        | 1.38        | 1.99        | 2.53       | 2.34        | 1.95        | 1.61        | 1.24         | 1.00        | .97         | 1.07        |
| 1916..... | 1.17        | 1.21        | 1.38        | 1.50        | 1.93       | 2.27        | 2.15        | 2.26        | 2.17         | 2.40        | 2.61        | 3.04        |
| 1917..... | 3.95        | 5.65        | 6.77        | 7.61        | 7.53       | 5.10        | 3.23        | 2.19        | 1.76         | 1.79        | 2.66        | 2.28        |
| 1918..... | 2.74        | 3.26        | 2.86        | 2.93        | 3.23       | 3.55        | 3.41        | 2.96        | 2.45         | 2.16        | 1.99        | 2.05        |
| 1919..... | 2.19        | 2.33        | 2.71        | 3.79        | 4.67       | 4.68        | 4.23        | 3.73        | 3.08         | 2.83        | 2.74        | 3.49        |
| 1920..... | 4.31        | 5.05        | 5.25        | 5.50        | 6.75       | 5.47        | 4.71        | 3.28        | 2.03         | 1.05        | 1.67        | 1.77        |
| 1921..... | 1.91        | 1.86        | 1.71        | 2.03        | 3.10       | 4.04        | 3.95        | 3.16        | 2.61         | 2.39        | 2.42        | 2.77        |

# Statistics of Cabbage.

649

## CABBAGE—Continued.

TABLE 249.—Cabbage (Danish): Monthly range and average jobbing prices per 100 pounds at 10 markets, 1921.

| Market.          | January<br>average. | February.     |          | March.        |          | October.      |          | November.     |          | December<br>average. |
|------------------|---------------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|----------------------|
|                  |                     | Range.        | Average. | Range.        | Average. | Range.        | Average. | Range.        | Average. |                      |
| New York.....    | \$1.00              | \$0.68-\$0.83 | \$0.73   | \$0.68-\$0.95 | \$0.81   | \$1.82-\$2.05 | \$1.98   | \$1.73-\$2.40 | \$2.08   | \$2.49               |
| Chicago.....     | .82                 | .47-.83       | .71      | .30-.73       | .64      | 1.75-2.25     | 2.02     | 2.00-3.25     | 2.47     | 2.59                 |
| Philadelphia.... | .83                 | .55-.80       | .69      | .53-.83       | .69      | 1.50-2.00     | 1.87     | 1.50-2.35     | 1.91     | 2.42                 |
| Pittsburgh.....  | 1.04                | .70-.95       | .89      | .53-.73       | .68      | 2.15-2.75     | 2.43     | 2.25-2.98     | 2.57     | 2.67                 |
| St. Louis.....   | 1.12                | .75-1.25      | .99      | .63-1.25      | .96      | 1.69-2.75     | 2.15     | 1.81-2.60     | 2.30     | 2.65                 |
| Cincinnati.....  | 1.03                | .95-1.18      | 1.05     | .50-1.13      | .82      | 1.50-2.62     | 2.14     | 1.50-2.50     | 2.10     | 2.73                 |
| St. Paul.....    |                     |               |          |               |          |               |          |               |          |                      |
| Minneapolis..... |                     |               |          |               |          |               |          |               |          |                      |
| Kansas City..... | 1.39                | .75-1.50      | 1.05     | .50-1.60      | .78      | 1.50-2.50     | 2.09     | 1.75-3.25     | 2.61     | 3.15                 |
| Washington.....  | 1.93                | 1.25-1.50     | 1.47     | 1.00-1.50     | 1.25     |               |          | 2.00-3.00     | 2.53     | 3.03                 |

<sup>1</sup> Sales direct to retailers.

TABLE 250.—Cabbage: Carlot shipments, by States of origin, for 1917-1921.

| State.                        | 1917             | 1918  | 1919             | 1920             | 1921             | State.           | 1917             | 1918             | 1919             | 1920             | 1921             |
|-------------------------------|------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Maine.....                    |                  | 50    | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 54               | Iowa.....        | 453              | 389              | 205              | 374              | 144              |
| New York, Long<br>Island..... | 118              | 111   | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> ) | Missouri.....    | ( <sup>1</sup> ) | 50               | 138              | ( <sup>1</sup> ) | 99               |
| New York, other..             | 4,999            | 8,357 | 7,300            | 7,042            | 9,603            | Kentucky.....    | 96               | 121              | 185              | 128              | 98               |
| New Jersey.....               | ( <sup>1</sup> ) | 60    | ( <sup>1</sup> ) | 111              | ( <sup>1</sup> ) | Tennessee.....   | 51               | 117              | 175              | 141              | 173              |
| Pennsylvania.....             | 94               | 160   | 383              | 239              | 291              | Alabama.....     | 87               | 800              | 421              | 285              | 940              |
| Maryland.....                 | 171              | 63    | 254              | 260              | 325              | Mississippi..... | 281              | 1,128            | 666              | 884              | 921              |
| Virginia.....                 | 1,891            | 1,927 | 1,508            | 1,532            | 3,596            | Louisiana.....   | 150              | 258              | 189              | 238              | 313              |
| North Carolina..              | ( <sup>1</sup> ) | 69    | ( <sup>1</sup> ) | 66               | 230              | Texas.....       | 981              | 304              | 1,437            | 4,528            | 1,757            |
| South Carolina..              | 663              | 1,867 | 1,172            | 1,087            | 3,285            | Colorado.....    | 2,496            | 1,960            | 2,323            | 1,656            | 2,571            |
| Florida.....                  | 1,413            | 3,782 | 1,537            | 4,745            | 1,518            | Oregon.....      | ( <sup>1</sup> ) | 51               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Ohio.....                     | 546              | 578   | 283              | 342              | 335              | Washington.....  | 74               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 108              | 173              |
| Indiana.....                  | 250              | 161   | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | California.....  | 1,412            | 1,078            | 1,395            | 1,247            | 845              |
| Illinois.....                 | 65               | 267   | 161              | 146              | 102              | All other.....   | 203              | 119              | 497              | 243              | 317              |
| Michigan.....                 | 524              | 430   | 385              | 335              | 456              | Total.....       | 20,354           | 28,661           | 24,982           | 31,020           | 32,089           |
| Wisconsin.....                | 2,815            | 3,334 | 3,608            | 4,179            | 3,348            |                  |                  |                  |                  |                  |                  |
| Minnesota.....                | 582              | 1,010 | 961              | 834              | 612              |                  |                  |                  |                  |                  |                  |

<sup>1</sup> Included in all other.

<sup>2</sup> Included in New York other.

## ONIONS.

TABLE 251.—Commercial acreage, yield per acre, and production of onions in the United States, 1919–1921.

| State.             | Acreage harvested. |               |               | Yield per acre. |              |              | Production (cars of 500 bushels each). |              |              |
|--------------------|--------------------|---------------|---------------|-----------------|--------------|--------------|--|--------------|--------------|
|                    | 1919               | 1920          | 1921          | 1919            | 1920         | 1921         | 1919                                   | 1920         | 1921         |
| Early crop:        | <i>Acres.</i>      | <i>Acres.</i> | <i>Acres.</i> | <i>Bush.</i>    | <i>Bush.</i> | <i>Bush.</i> | <i>Cars.</i>                           | <i>Cars.</i> | <i>Cars.</i> |
| California.....    | 865                | 3,300         | 2,000         | 312             | 298          | 245          | 540                                    | 1,967        | 980          |
| Louisiana.....     | 972                | 1,080         | 1,010         | 160             | 158          | 206          | 311                                    | 341          | 416          |
| Texas.....         | 6,590              | 12,446        | 10,503        | 267             | 256          | 207          | 3,519                                  | 6,372        | 4,348        |
| Late Crop:         |                    |               |               |                 |              |              |  |              |              |
| California.....    | 6,570              | 8,400         | 7,149         | 325             | 325          | 225          | 4,271                                  | 5,460        | 3,217        |
| Colorado.....      | 832                | 755           | 765           | 250             | 344          | 250          | 418                                    | 519          | 382          |
| Idaho.....         | 61                 | 275           | 145           | 500             | 558          | 570          | 61                                     | 307          | 165          |
| Illinois.....      | 909                | 954           | 1,052         | 200             | 430          | 210          | 364                                    | 820          | 442          |
| Indiana.....       | 4,779              | 4,582         | 3,931         | 200             | 498          | 237          | 1,912                                  | 4,564        | 1,863        |
| Iowa.....          | 1,206              | 1,345         | 1,250         | 300             | 454          | 202          | 778                                    | 1,221        | 505          |
| Kentucky.....      | 1,000              | 900           | 1,000         | 300             | 368          | 175          | 600                                    | 682          | 350          |
| Maryland.....      | 300                | 300           | 300           | 250             | 300          | 250          | 150                                    | 180          | 150          |
| Massachusetts..... | 4,405              | 4,850         | 4,500         | 340             | 497          | 260          | 2,985                                  | 4,821        | 2,840        |
| Michigan.....      | 1,568              | 1,393         | 1,275         | 175             | 498          | 225          | 549                                    | 1,387        | 574          |
| Minnesota.....     | 1,438              | 1,415         | 1,280         | 275             | 310          | 122          | 791                                    | 877          | 312          |
| New Jersey.....    | 2,376              | 2,610         | 2,380         | 250             | 241          | 239          | 1,188                                  | 1,258        | 1,138        |
| New York.....      | 8,563              | 8,537         | 7,265         | 265             | 410          | 268          | 4,538                                  | 7,000        | 3,889        |
| Ohio.....          | 6,092              | 6,511         | 5,593         | 250             | 410          | 191          | 3,046                                  | 5,339        | 2,137        |
| Oregon.....        | 760                | 882           | 609           | 300             | 372          | 296          | 456                                    | 656          | 361          |
| Pennsylvania.....  | 331                | 350           | 289           | 300             | 425          | 200          | 199                                    | 298          | 116          |
| Texas.....         | 423                | 750           | 800           | 250             | 250          | 275          | 212                                    | 375          | 440          |
| Utah.....          | 124                | 120           | 124           | 500             | 480          | 250          | 124                                    | 115          | 62           |
| Virginia.....      | 866                | 950           | 820           | 250             | 316          | 280          | 433                                    | 600          | 459          |
| Washington.....    | 791                | 770           | 789           | 400             | 412          | 271          | 633                                    | 634          | 428          |
| Wisconsin.....     | 1,135              | 1,175         | 1,010         | 140             | 467          | 114          | 318                                    | 1,097        | 230          |

<sup>1</sup> Does not include acreage grown under contract with seedsmen.

TABLE 252.—Onions: Farm price, cents per bushel on 15th of each month, 1910–1921.

| Year.     | Jan. 15. | Feb. 15. | Mar. 15. | Apr. 15. | May 15. | June 15. | July 15. | Aug. 15. | Sept. 15. | Oct. 15. | Nov. 15. | Dec. 15. |
|-----------|----------|----------|----------|----------|---------|----------|----------|----------|-----------|----------|----------|----------|
| 1910..... | 94.4     | 100.1    | 92.5     | 102.4    | 102.8   | 105.8    | 104.5    | 99.8     | 99.4      | 93.2     | 94.6     | 98.      |
| 1911..... | 101.0    | 104.0    | 105.0    | 119.0    | 120.0   | 134.0    | 122.0    | 116.0    | 104.0     | 102.0    | 103.0    | 113.     |
| 1912..... | 117.0    | 140.0    | 187.0    | 175.0    | 177.0   | 155.0    | 114.0    | 100.0    | 89.0      | 85.0     | 84.0     | 84.      |
| 1913..... | 81.6     | 77.5     | 77.0     | 79.0     | 87.2    | 95.6     | 101.7    | 105.1    | 103.9     | 110.2    | 114.9    | 114.     |
| 1914..... | 121.0    | 140.7    | 155.2    | 159.2    | 152.6   | 140.8    | 170.4    | 137.9    | 103.3     | 88.3     | 84.4     | 92.      |
| 1915..... | 88.9     | 97.6     | 95.3     | 104.4    | 102.9   | 102.9    | 93.0     | 86.3     | 82.8      | 94.8     | 94.8     | 99.      |
| 1916..... | 113.2    | 126.3    | 130.3    | 123.5    | 123.3   | 133.8    | 147.3    | 133.5    | 122.9     | 131.4    | 153.8    | 175.     |
| 1917..... | 208.4    | 357.9    | 476.2    | 495.6    | 398.0   | 308.0    | 201.0    | 154.7    | 142.9     | 157.5    | 176.6    | 177.     |
| 1918..... | 178.9    | 183.2    | 147.0    | 134.1    | 134.7   | 138.7    | 162.6    | 164.7    | 163.3     | 143.2    | 143.1    | 131.     |
| 1919..... | 183.5    | 154.7    | 199.8    | 202.1    | 229.9   | 234.1    | 233.0    | 225.8    | 195.4     | 196.4    | 212.5    | 245.     |
| 1920..... | 280.8    | 307.3    | 325.6    | 344.2    | 337.6   | 264.2    | 204.8    | 176.4    | 172.9     | 158.9    | 144.8    | 132.     |
| 1921..... | 135.2    | 131.2    | 114.2    | 98.4     | 106.7   | 188.2    | 147.7    | 159.1    | 168.5     | 186.6    | 219.9    | 245.     |

TABLE 253.—Onions (various common varieties): Monthly average jobbing prices per 100 pounds at 10 markets, 1921.

| Market.           | Jan.   | Feb.   | Mar.   | April  | Aug. <sup>1</sup> | Sept.  | Oct.   | Nov.   | Dec.   |
|-------------------|--------|--------|--------|--------|-------------------|--------|--------|--------|--------|
| New York.....     | \$1.31 | \$0.98 | \$0.80 | \$1.13 | \$2.80            | \$3.43 | \$5.06 | \$5.63 | \$5.45 |
| Chicago.....      | 1.16   | .98    | .83    | .80    | 2.58              | 3.61   | 4.47   | 5.11   | 5.62   |
| Philadelphia..... | 1.27   | .98    | .87    | 1.11   | 3.02              | 3.80   | 4.80   | 5.34   | 5.52   |
| Pittsburgh.....   | 1.26   | .89    | .90    | 1.11   | 3.05              | 3.82   | 4.86   | 5.44   | 5.57   |
| St. Louis.....    | 1.17   | .91    | .70    | .78    | 2.95              | 3.70   | 4.88   | 5.45   | 5.68   |
| Cincinnati.....   | 1.25   | 1.13   | .85    | .....  | 2.92              | 3.74   | 5.19   | 5.59   | 5.45   |
| St. Paul.....     | .....  | .....  | .....  | .....  | 2.85              | 3.49   | 4.92   | 4.83   | 4.44   |
| Minneapolis.....  | .....  | .....  | .....  | .....  | 2.70              | 3.34   | 4.76   | 4.81   | 4.60   |
| Kansas City.....  | 1.35   | 1.13   | .66    | .....  | 2.97              | 3.60   | 4.38   | 5.40   | 5.42   |
| Washington.....   | 1.88   | 1.53   | 1.35   | 2.03   | 3.64              | 4.27   | 4.93   | 5.93   | 5.78   |

Quotations began August 22.

<sup>2</sup> Sales direct to retailers.

ONIONS—Continued.

TABLE 254.—Onions: Carlot shipments, by States of origin, for 1917–1921.

| State.             | 1917  | 1918  | 1919  | 1920  | 1921  | State.          | 1917   | 1918   | 1919   | 1920   | 1921   |
|--------------------|-------|-------|-------|-------|-------|-----------------|--------|--------|--------|--------|--------|
| Massachusetts..... | 2,295 | 2,862 | 2,917 | 3,378 | 2,835 | Iowa.....       | 676    | 971    | 502    | 824    | 466    |
| New York.....      | 1,557 | 2,621 | 2,588 | 2,721 | 3,564 | Kentucky.....   | 155    | 213    | 339    | 299    | 365    |
| New Jersey.....    | 561   | 597   | 638   | 629   | 436   | Louisiana.....  | 174    | 480    | 101    | 106    | 79     |
| Pennsylvania.....  | (1)   | 77    | 118   | 80    | 164   | Texas.....      | 5,596  | 3,575  | 2,876  | 5,088  | 4,209  |
| Maryland.....      | (1)   | (1)   | (1)   | 89    | 150   | Colorado.....   | 185    | 198    | 198    | 177    | 392    |
| Virginia.....      | 153   | 99    | 134   | 181   | 140   | Idaho.....      | (1)    | (1)    | (1)    | 28     | 46     |
| Florida.....       |       | (1)   |       | 27    |       | Washington..... | 308    | 467    | 611    | 766    | 585    |
| Ohio.....          | 1,664 | 1,805 | 1,890 | 2,909 | 2,128 | Oregon.....     | 207    | 138    | 310    | 85     | 270    |
| Indiana.....       | 881   | 1,829 | 1,158 | 2,646 | 2,428 | California..... | 3,257  | 4,008  | 5,219  | 4,526  | 3,648  |
| Illinois.....      | 164   | 305   | 195   | 300   | 279   | All other.....  | 173    | 88     | 128    | 33     | 108    |
| Michigan.....      | 121   | 590   | 308   | 576   | 591   | Total.....      | 19,152 | 22,027 | 20,874 | 25,989 | 23,359 |
| Wisconsin.....     | 180   | 362   | 156   | 267   | 254   |                 |        |        |        |        |        |
| Minnesota.....     | 545   | 832   | 489   | 232   | 222   |                 |        |        |        |        |        |

<sup>1</sup> Included in all other.

TOMATOES.

TABLE 255.—Commercial acreage, yield per acre, and production of tomatoes for canning and table stock, 1918–1921.

| State.              | Acreage.     |              |              | Yield per acre. |              |              | Production.  |              |              |
|---------------------|--------------|--------------|--------------|-----------------|--------------|--------------|--------------|--------------|--------------|
|                     | 1919         | 1920         | 1921         | 1919            | 1920         | 1921         | 1919         | 1920         | 1921         |
|                     | <i>Acre.</i> | <i>Acre.</i> | <i>Acre.</i> | <i>Tons.</i>    | <i>Tons.</i> | <i>Tons.</i> | <i>Tons.</i> | <i>Tons.</i> | <i>Tons.</i> |
| Alabama.....        | 4,858        | 5,890        | 7,795        | 3.0             | 2.2          | 3.4          | 2,649        | 1,958        | 2,713        |
| Arkansas.....       | 4,973        | 5,530        | 2,265        | 2.8             | 3.3          | 3.3          | 13,938       | 19,229       | 7,474        |
| California.....     | 46,684       | 39,153       | 14,145       | 7.0             | 5.5          | 5.4          | 329,788      | 215,342      | 76,383       |
| Colorado.....       | 2,806        | 3,435        | 1,237        | 9.1             | 6.3          | 6.0          | 25,532       | 21,640       | 7,602        |
| Connecticut.....    | 988          | 1,010        | 1,021        | 5.0             | 6.7          | 3.0          | 4,940        | 6,767        | 3,063        |
| Delaware.....       | 22,807       | 19,677       | 2,503        | 1.6             | 4.5          | 4.9          | 36,481       | 88,546       | 12,265       |
| Florida.....        | 20,640       | 22,745       | 18,030       | 2.8             | 2.3          | 5.7          | 57,792       | 52,314       | 102,771      |
| Georgia.....        | 468          | 440          | 425          | 3.0             | 2.5          | 3.5          | 1,404        | 1,100        | 1,438        |
| Idaho.....          | 61           | 190          | 283          | 6.0             | 2.5          | 7.0          | 366          | 475          | 1,981        |
| Illinois.....       | 8,520        | 9,310        | 7,064        | 3.6             | 6.4          | 3.5          | 30,672       | 59,584       | 24,724       |
| Indiana.....        | 40,644       | 44,876       | 25,753       | 4.2             | 4.5          | 5.0          | 170,705      | 201,942      | 128,765      |
| Iowa.....           | 3,077        | 2,690        | 2,591        | 4.8             | 5.6          | 3.3          | 14,770       | 15,064       | 8,580        |
| Kansas.....         | 1,241        | 1,245        | 1,180        | 4.0             | 5.3          | 3.0          | 4,964        | 6,598        | 3,540        |
| Kentucky.....       | 4,330        | 6,907        | 4,870        | 5.5             | 4.1          | 3.3          | 26,565       | 28,319       | 16,071       |
| Louisiana.....      | 391          | 255          | 205          | 3.0             | 6.0          | 3.0          | 1,173        | 1,530        | 615          |
| Maryland.....       | 60,071       | 49,511       | 17,336       | 1.5             | 3.5          | 4.2          | 90,106       | 173,288      | 72,811       |
| Massachusetts.....  | 1,696        | 1,700        | 1,725        | 5.0             | 3.9          | 6.0          | 8,450        | 6,630        | 10,330       |
| Michigan.....       | 5,139        | 4,200        | 3,440        | 4.1             | 5.5          | 5.6          | 21,083       | 23,100       | 19,264       |
| Minnesota.....      | 556          | 575          | 540          | 5.0             | 3.5          | 3.0          | 2,780        | 2,012        | 1,620        |
| Mississippi.....    | 5,777        | 6,440        | 7,350        | 4.0             | 2.6          | 2.9          | 23,108       | 16,744       | 21,315       |
| Missouri.....       | 18,274       | 18,995       | 8,149        | 2.0             | 3.4          | 2.1          | 36,548       | 63,223       | 25,262       |
| Nebraska.....       | 1,349        | 445          | 294          | 1.5             | 4.0          | 4.0          | 524          | 1,780        | 1,176        |
| New Jersey.....     | 39,827       | 36,960       | 31,717       | 2.9             | 4.9          | 5.1          | 103,628      | 179,144      | 161,757      |
| New Mexico.....     | 700          | 100          | 70           | 3.7             | 1.3          | 4.0          | 2,590        | 180          | 280          |
| New York.....       | 14,229       | 16,347       | 9,254        | 6.5             | 8.5          | 8.2          | 92,488       | 138,950      | 75,833       |
| North Carolina..... | 487          | 410          | 380          | 6.0             | 3.1          | 3.6          | 2,922        | 1,271        | 1,368        |
| Ohio.....           | 13,232       | 13,745       | 11,629       | 5.7             | 6.6          | 5.8          | 75,422       | 90,717       | 67,448       |
| Oklahoma.....       | 830          | 880          | 680          | 4.0             | 5.0          | 3.0          | 3,320        | 4,400        | 2,040        |
| Oregon.....         | 752          | 535          | 515          | 3.2             | 6.0          | 12.0         | 2,406        | 3,210        | 6,180        |
| Pennsylvania.....   | 6,579        | 6,110        | 5,328        | 3.6             | 6.9          | 4.8          | 23,684       | 42,159       | 25,565       |
| South Carolina..... | 419          | 442          | 562          | 3.0             | 2.5          | 3.1          | 1,257        | 1,105        | 1,742        |
| Tennessee.....      | 9,349        | 10,827       | 5,914        | 3.3             | 3.2          | 3.0          | 30,852       | 33,046       | 17,742       |
| Texas.....          | 4,519        | 8,385        | 10,436       | 3.0             | 2.5          | 3.0          | 13,557       | 20,952       | 31,308       |
| Utah.....           | 4,747        | 3,925        | 1,178        | 8.5             | 9.6          | 12.3         | 40,350       | 37,680       | 14,489       |
| Virginia.....       | 27,462       | 20,115       | 2,213        | 2.7             | 3.5          | 3.0          | 74,147       | 70,402       | 6,639        |
| Washington.....     | 695          | 650          | 658          | 7.0             | 7.2          | 10.0         | 4,865        | 4,680        | 6,680        |
| West Virginia.....  | 1,836        | 1,990        | 1,068        | 4.1             | 3.9          | 3.0          | 7,733        | 7,761        | 3,204        |
| Wisconsin.....      | 1,131        | 1,275        | 1,242        | 5.2             | 3.8          | 3.2          | 5,881        | 4,845        | 3,974        |
| Total.....          | 377,748      | 361,915      | 204,076      | 3.7             | 4.6          | 4.8          | 1,386,460    | 1,647,707    | 976,002      |



## TOMATOES—Continued.

TABLE 256.—*Tomatoes: Monthly average jobbing prices per 4-basket and 6-basket carriers at 10 markets, 1921.*

| Market.           | 4-basket carriers. |        | 6-basket carriers, June. | Market.          | 4-basket carriers. |        | 6-basket carriers, June. |
|-------------------|--------------------|--------|--------------------------|------------------|--------------------|--------|--------------------------|
|                   | June.              | July.  |                          |                  | June.              | July.  |                          |
| New York.....     | \$1.70             | \$1.20 | \$2.96                   | St. Louis.....   | \$1.61             | \$0.71 | .....                    |
| Chicago.....      | 1.59               | 1.05   | .....                    | Cincinnati.....  | 1.52               | 1.05   | \$2.63                   |
| Philadelphia..... | 1.41               | .....  | 2.58                     | Kansas City..... | 1.68               | .67    | .....                    |
| Pittsburgh.....   | 1.58               | 1.22   | 3.19                     | Washington.....  | .....              | 1.32   | 3.03                     |

<sup>1</sup> Sales direct to retailers.TABLE 257.—*Tomatoes: Carlot shipments, by States of origin, for 1917–1921.*

| State.              | 1917             | 1918             | 1919             | 1920             | 1921             | State.           | 1917             | 1918             | 1919             | 1920             | 1921             |
|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| New York.....       | 143              | 381              | 457              | 845              | 1,098            | Missouri.....    | 97               | 89               | 147              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| New Jersey.....     | 2,239            | 2,006            | 1,012            | 2,356            | 2,132            | Kentucky.....    | 93               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 559              | 367              |
| Pennsylvania.....   | ( <sup>1</sup> ) | 53               | 360              | 41               | 24               | Tennessee.....   | 947              | 651              | 368              | 805              | 357              |
| Delaware.....       | 877              | 1,130            | 502              | 153              | 189              | Mississippi..... | 1,063            | 1,379            | 1,358            | 1,373            | 1,961            |
| Maryland.....       | 237              | 200              | 206              | 138              | 128              | Texas.....       | 1,278            | 1,123            | 1,205            | 1,256            | 1,954            |
| Virginia.....       | 173              | 97               | .....            | ( <sup>1</sup> ) | 56               | Arkansas.....    | ( <sup>1</sup> ) | .....            | ( <sup>1</sup> ) | 21               | 22               |
| South Carolina..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 26               | ( <sup>1</sup> ) | 58               | Utah.....        | ( <sup>1</sup> ) | 633              | 333              | 251              | 170              |
| Florida.....        | 4,695            | 3,700            | 4,487            | 3,749            | 5,774            | Washington.....  | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 62               | 31               |
| Ohio.....           | 628              | 799              | 489              | 330              | 351              | California.....  | 519              | 1,514            | 2,186            | 1,958            | 1,681            |
| Indiana.....        | 524              | 1,150            | 948              | 1,148            | 528              | All other.....   | 115              | 87               | 91               | 97               | 151              |
| Illinois.....       | 487              | 393              | 234              | 340              | 155              | Total.....       | 14,115           | 15,471           | 14,503           | 15,556           | 17,169           |
| Michigan.....       | ( <sup>1</sup> ) | 83               | ( <sup>1</sup> ) | 28               | 22               |                  |                  |                  |                  |                  |                  |
| Iowa.....           | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 29               | 23               | ( <sup>1</sup> ) |                  |                  |                  |                  |                  |                  |

<sup>1</sup> Included in all other.TABLE 258.—*Tomatoes: Farm price, cents per bushel, 15th of month, 1912–1921.*

| Date.         | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918  | 1919  | 1920  | 1921  |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| July 15.....  | 127.6 | 161.4 | 167.4 | 141.4 | 161.5 | 194.3 | 219.1 | 240.3 | 324.4 | 319.6 |
| Aug. 15.....  | 75.6  | 95.8  | 92.5  | 66.4  | 88.4  | 124.3 | 133.1 | 177.0 | 168.4 | 142.4 |
| Sept. 15..... | 58.7  | 68.0  | 68.0  | 36.9  | 78.6  | 169.5 | 103.0 | 137.2 | 104.4 | 105.6 |
| Oct. 15.....  | 62.3  | 73.0  | 60.8  | 67.9  | 82.1  | 117.6 | 106.6 | 117.7 | 98.9  | 113.5 |

## TURNIPS.

TABLE 259.—*Turnips: Farm price, cents per bushel, 15th of month, 1912–1921.*

| Date.        | 1912–13 | 1913–14 | 1914–15 | 1915–16 | 1916–17 | 1917–18 | 1918–19 | 1919–20 | 1920–21 | 1921–22 |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Nov. 15..... | 44.6    | 58.1    | 47.4    | 45.9    | 68.4    | 76.4    | 79.6    | 58.9    | 94.1    | 88.5    |
| Dec. 15..... | 49.1    | 55.1    | 46.4    | 45.1    | 73.3    | 81.1    | 79.0    | 101.8   | 85.9    | 89.5    |
| Jan. 15..... | 49.6    | 58.3    | 42.9    | 48.6    | 78.6    | 88.4    | 82.1    | 112.4   | 88.7    | 87.5    |
| Feb. 15..... | 51.2    | 60.0    | 51.1    | 49.6    | 91.1    | 89.9    | 84.7    | 124.1   | 88.7    | 90.3    |

## CELERY.

TABLE 260.—*Celery: Carlot shipments, by States of origin, for 1919–1921.*

| State.            | 1919             | 1920  | 1921  | State.          | 1919  | 1920  | 1921   |
|-------------------|------------------|-------|-------|-----------------|-------|-------|--------|
| New York.....     | 1,523            | 2,675 | 3,084 | Colorado.....   | 212   | 283   | 201    |
| New Jersey.....   | 177              | 105   | 216   | California..... | 1,796 | 2,361 | 3,367  |
| Pennsylvania..... | ( <sup>1</sup> ) | 176   | 325   | All other.....  | 93    | 71    | 331    |
| Florida.....      | 2,051            | 3,010 | 4,172 | Total.....      | 6,449 | 9,398 | 12,428 |
| Michigan.....     | 598              | 604   | 1,011 |                 |       |       |        |

<sup>1</sup> Included in all other.

LETTUCE.

TABLE 261.—Lettuce: Carlot shipments, by States of origin, for 1919-1921.

| State.              | 1919             | 1920             | 1921             | State.          | 1919             | 1920             | 1921             |
|---------------------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|
| New York.....       | 1,781            | 2,138            | 3,441            | Louisiana.....  | 36               | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| New Jersey.....     | 245              | 515              | 478              | Texas.....      | 90               | 178              | 114              |
| Pennsylvania.....   | ( <sup>1</sup> ) | 17               | 22               | Colorado.....   | ( <sup>1</sup> ) | 125              | 244              |
| Virginia.....       | 31               | 26               | 135              | Arizona.....    | 41               | 165              | 165              |
| North Carolina..... | 319              | 265              | 448              | Idaho.....      | ( <sup>1</sup> ) | 26               | 182              |
| South Carolina..... | 395              | 356              | 583              | Washington..... | ( <sup>1</sup> ) | 345              | 632              |
| Florida.....        | 2,154            | 3,120            | 2,296            | California..... | 2,731            | 6,350            | 9,735            |
| Ohio.....           | 52               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | All other.....  | 75               | 36               | 69               |
| Michigan.....       | 63               | 110              | 97               | Total.....      | 8,018            | 13,821           | 18,685           |
| Minnesota.....      | 45               | 51               | 43               |                 |                  |                  |                  |

<sup>1</sup>Included in all other.

STRAWBERRIES.

TABLE 262.—Strawberries: Monthly average jobbing prices per quart at 10 markets, 1921.

| Market.           | March. <sup>1</sup> | April. | May.   | Market.           | March. <sup>1</sup> | April. | May.   |
|-------------------|---------------------|--------|--------|-------------------|---------------------|--------|--------|
| New York.....     | \$0.47              | \$0.41 | \$0.27 | Cincinnati.....   | \$0.33              | \$0.27 | \$0.23 |
| Chicago.....      | .31                 | .37    | .24    | St. Paul.....     | .35                 | .44    | .33    |
| Philadelphia..... | .33                 | .34    | .23    | Minneapolis.....  | .37                 | .41    | .31    |
| Pittsburgh.....   | .34                 | .34    | .26    | Kansas City.....  | .33                 | .36    | .23    |
| St. Louis.....    | .31                 | .33    | .23    | Washington *..... | .50                 | .35    | .22    |

<sup>1</sup>Quotations began Mar. 17.

\* Sales direct to retailers.

TABLE 263.—Strawberries: Carlot shipments, by States of origin, for 1917-1921.

| State.              | 1917             | 1918             | 1919             | 1920             | 1921             | State.           | 1917   | 1918             | 1919             | 1920             | 1921             |
|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|------------------|
| Massachusetts.....  | 55               | 75               | 84               | 87               | 102              | Kentucky.....    | 676    | 410              | 132              | 239              | 387              |
| New York.....       | 210              | 242              | 112              | 262              | 244              | Tennessee.....   | 1,781  | 1,234            | 1,099            | 1,182            | 1,693            |
| New Jersey.....     | 829              | 445              | 326              | 559              | 425              | Alabama.....     | 196    | 273              | 223              | 147              | 285              |
| Delaware.....       | 2,340            | 822              | 430              | 640              | 853              | Mississippi..... | 91     | 79               | 102              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Maryland.....       | 2,193            | 636              | 611              | 787              | 1,069            | Louisiana.....   | 1,100  | 556              | 632              | 656              | 1,517            |
| Virginia.....       | 1,352            | 342              | 208              | 349              | 697              | Texas.....       | 121    | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| North Carolina..... | 696              | 555              | 484              | 446              | 479              | Arkansas.....    | 1,096  | 651              | 1,034            | 896              | 1,094            |
| Florida.....        | 193              | 79               | ( <sup>1</sup> ) | 153              | 103              | Washington.....  | 53     | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 140              |
| Indiana.....        | 76               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 62               | ( <sup>1</sup> ) | Oregon.....      | 106    | 73               | 93               | 120              | 116              |
| Illinois.....       | 347              | 125              | 80               | 98               | 74               | California.....  | 245    | 509              | 703              | 569              | 291              |
| Michigan.....       | 475              | 272              | 391              | 439              | 455              | All other.....   | 161    | 161              | 158              | 111              | 131              |
| Wisconsin.....      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 68               | 52               | Total.....       | 15,065 | 8,452            | 8,106            | 8,490            | 10,681           |
| Iowa.....           | ( <sup>1</sup> ) | 55               | 86               | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |        |                  |                  |                  |                  |
| Missouri.....       | 673              | 620              | 1,081            | 318              | 466              |                  |        |                  |                  |                  |                  |

<sup>1</sup>Included in all other.

WATERMELONS.

TABLE 264.—Watermelons: Carlot shipments, by States of origin, for 1919-1921.

| State.              | 1919  | 1920   | 1921   | State.           | 1919             | 1920             | 1921             |
|---------------------|-------|--------|--------|------------------|------------------|------------------|------------------|
| Delaware.....       | 327   | 177    | 490    | Mississippi..... | ( <sup>1</sup> ) | 95               | 205              |
| Maryland.....       | 515   | 458    | 763    | Texas.....       | 3,007            | 4,845            | 4,298            |
| Virginia.....       | 263   | 312    | 264    | Oklahoma.....    | 570              | 465              | 566              |
| North Carolina..... | 891   | 799    | 1,530  | Arkansas.....    | 268              | 314              | 577              |
| South Carolina..... | 2,673 | 4,735  | 4,427  | Colorado.....    | 211              | 71               | 166              |
| Georgia.....        | 8,984 | 11,103 | 16,148 | Arizona.....     | 121              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Florida.....        | 3,878 | 6,807  | 5,772  | Washington.....  | 143              | 195              | 142              |
| Indiana.....        | 581   | 661    | 742    | California.....  | 3,306            | 3,276            | 3,771            |
| Illinois.....       | 190   | 251    | 461    | All other.....   | 93               | 171              | 476              |
| Iowa.....           | 321   | 348    | 367    | Total.....       | 30,880           | 39,265           | 46,483           |
| Missouri.....       | 3,516 | 3,072  | 3,223  |                  |                  |                  |                  |
| Alabama.....        | 708   | 1,160  | 1,496  |                  |                  |                  |                  |

<sup>1</sup>Included in all other.

## CANTALOUPE.

TABLE 265.—Cantaloupes: Carlot shipments, by States of origin, for 1917-1921.

| State.              | 1917             | 1918             | 1919             | 1920             | 1921  | State.          | 1917             | 1918             | 1919   | 1920             | 1921   |
|---------------------|------------------|------------------|------------------|------------------|-------|-----------------|------------------|------------------|--------|------------------|--------|
| New Jersey.....     | 99               | 50               | 62               | 117              | 241   | Texas.....      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 123    | ( <sup>1</sup> ) | 162    |
| Delaware.....       | 702              | 429              | 590              | 581              | 943   | Arkansas.....   | 797              | 699              | 1,106  | 936              | 1,501  |
| Maryland.....       | 855              | 490              | 835              | 771              | 1,209 | Colorado.....   | 1,898            | 1,818            | 3,132  | 2,454            | 3,216  |
| North Carolina..... | 1,106            | 418              | 523              | 359              | 821   | New Mexico..... | 227              | 256              | 378    | 937              | 421    |
| South Carolina..... | 157              | 31               | 100              | 110              | 300   | Arizona.....    | 1,215            | 1,169            | 1,832  | 1,164            | 1,474  |
| Georgia.....        | 789              | 551              | 314              | 389              | 640   | Nevada.....     | 139              | 36               | 36     | 48               | 74     |
| Florida.....        | ( <sup>1</sup> ) | 26               | 82               | ( <sup>1</sup> ) | 32    | Washington..... | 145              | 110              | 100    | 329              | 209    |
| Indiana.....        | 664              | 443              | 462              | 635              | 644   | California..... | 8,258            | 6,848            | 12,010 | 13,100           | 13,177 |
| Illinois.....       | 119              | 103              | 85               | 85               | 97    | All other.....  | 104              | 86               | 39     | 75               | 66     |
| Michigan.....       | 42               | 37               | 204              | 209              | 176   | Total.....      | 17,430           | 13,619           | 22,039 | 22,377           | 25,574 |
| Iowa.....           | 68               | 43               | 26               | 40               | 41    |                 |                  |                  |        |                  |        |
| Missouri.....       | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 38               | 107   |                 |                  |                  |        |                  |        |
| Tennessee.....      | 46               | 26               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 23    |                 |                  |                  |        |                  |        |

<sup>1</sup> Included in all other.

## GRAPES.

TABLE 266.—Grapes: Carlot shipments, by States of origin, for 1919-1921.

| State.            | 1919             | 1920  | 1921             | State.          | 1919   | 1920             | 1921             |
|-------------------|------------------|-------|------------------|-----------------|--------|------------------|------------------|
| New York.....     | 3,751            | 6,079 | 2,451            | Missouri.....   | 36     | 26               | ( <sup>1</sup> ) |
| Pennsylvania..... | 881              | 1,245 | 390              | Washington..... | 37     | ( <sup>1</sup> ) | 67               |
| Delaware.....     | ( <sup>1</sup> ) | 44    | ( <sup>1</sup> ) | California..... | 21,605 | 26,974           | 32,565           |
| Ohio.....         | 87               | 50    | 68               | All other.....  | 61     | 74               | 42               |
| Michigan.....     | 3,783            | 4,607 | 1,237            | Total.....      | 30,349 | 39,205           | 33,888           |
| Iowa.....         | 108              | 106   | 68               |                 |        |                  |                  |

<sup>1</sup> Included in all other.

## FRUITS AND VEGETABLES.

TABLE 267.—Fruits and vegetables: Yearly unloads of 8 commodities at 10 markets, in carlots, 1916-1921.

| Crop and year.      | New York. | Chicago. | Philadelphia. | Pittsburgh. | St. Louis. | Cincinnati. | St. Paul. | Minneapolis. | Kansas City. | Washington. | Total. |
|---------------------|-----------|----------|---------------|-------------|------------|-------------|-----------|--------------|--------------|-------------|--------|
| Apples:             |           |          |               |             |            |             |           |              |              |             |        |
| 1916.....           | 10,191    | 5,252    | 3,342         | 3,445       | 3,225      | 1,338       | 589       | 869          | 953          | 459         | 29,663 |
| 1917.....           | 17,996    | 4,335    | 2,343         | 2,498       | 2,117      | 636         | 284       | 596          | 988          | 333         | 22,116 |
| 1918.....           | 11,336    | 4,536    | 2,701         | 2,961       | 1,540      | 1,130       | 410       | 568          | 709          | 633         | 26,514 |
| 1919.....           | 10,601    | 6,069    | 2,964         | 2,216       | 1,379      | 1,450       | 227       | 348          | 674          | 387         | 26,215 |
| 1920.....           | 11,088    | 7,102    | 3,217         | 2,792       | 1,975      | 1,617       | 401       | 464          | 1,006        | 590         | 30,222 |
| 1921.....           | 11,984    | 6,684    | 3,416         | 2,808       | 1,856      | 1,810       | 851       | 422          | 1,002        | 869         | 30,652 |
| 6-year average..... | 10,528    | 5,655    | 2,930         | 2,785       | 2,015      | 1,330       | 377       | 543          | 889          | 462         | 27,564 |
| Cabbages:           |           |          |               |             |            |             |           |              |              |             |        |
| 1916.....           | 2,070     | 1,366    | 1,565         | 1,461       | 987        | 452         | 75        | 75           | 388          | 235         | 8,674  |
| 1917.....           | 2,027     | 1,141    | 1,325         | 896         | 1,001      | 425         | 46        | 81           | 375          | 186         | 7,503  |
| 1918.....           | 2,880     | 1,322    | 1,936         | 1,670       | 853        | 577         | 54        | 57           | 580          | 371         | 10,305 |
| 1919.....           | 2,301     | 1,837    | 1,663         | 1,172       | 746        | 557         | 53        | 49           | 421          | 287         | 9,085  |
| 1920.....           | 2,306     | 1,355    | 1,906         | 1,297       | 864        | 596         | 74        | 121          | 399          | 393         | 9,311  |
| 1921.....           | 3,080     | 1,780    | 1,962         | 1,105       | 1,049      | 669         | 68        | 75           | 400          | 336         | 10,524 |
| 6-year average..... | 2,436     | 1,467    | 1,726         | 1,267       | 918        | 546         | 62        | 76           | 427          | 310         | 9,234  |
| Cantaloupes:        |           |          |               |             |            |             |           |              |              |             |        |
| 1916.....           | 3,141     | 1,628    | 924           | 1,530       | 397        | 442         | 90        | 175          | 270          | 123         | 8,720  |
| 1917.....           | 3,365     | 1,793    | 815           | 1,140       | 285        | 413         | 85        | 142          | 360          | 99          | 7,502  |
| 1918.....           | 3,029     | 1,069    | 493           | 1,068       | 286        | 389         | 38        | 118          | 128          | 126         | 6,734  |
| 1919.....           | 3,867     | 1,936    | 1,049         | 1,702       | 305        | 597         | 32        | 171          | 448          | 230         | 10,397 |
| 1920.....           | 4,213     | 2,061    | 1,091         | 1,275       | 452        | 554         | 60        | 94           | 396          | 269         | 10,462 |
| 1921.....           | 4,781     | 2,186    | 1,258         | 1,322       | 539        | 640         | 115       | 166          | 452          | 242         | 11,701 |
| 6-year average..... | 3,733     | 1,610    | 933           | 1,340       | 377        | 507         | 80        | 144          | 342          | 181         | 9,253  |

<sup>1</sup> Reports incomplete.<sup>2</sup> An additional 152 cars received in L. C. L. receipts.<sup>3</sup> Including incomplete reports of 1917.<sup>4</sup> An additional 53 cars received in L. C. L. receipts.<sup>5</sup> An additional 152 cars received in L. C. L. receipts.

FRUITS AND VEGETABLES—Continued.

TABLE 267.—Fruits and vegetables: Yearly unloads of 8 commodities at 10 markets, in carlots, 1916-1921—Continued.

| Crop and year.           | New York. | Chicago. | Philadelphia. | Pittsburgh. | St. Louis. | Cincinnati. | St. Paul. | Minneapolis. | Kansas City. | Washington. | Total.  |
|--------------------------|-----------|----------|---------------|-------------|------------|-------------|-----------|--------------|--------------|-------------|---------|
| <b>Onions:</b>           |           |          |               |             |            |             |           |              |              |             |         |
| 1916.....                | 4,951     | 1,450    | 1,574         | 1,441       | 501        | 284         | 83        | 146          | 330          | 137         | 11,197  |
| 1917.....                | 4,666     | 1,146    | 1,606         | 1,178       | 753        | 286         | 50        | 149          | 407          | 103         | 10,949  |
| 1918.....                | 4,465     | 695      | 1,542         | 1,208       | 549        | 276         | 25        | 75           | 399          | 220         | 9,444   |
| 1919.....                | 4,801     | 1,403    | 1,398         | 976         | 438        | 226         | 61        | 82           | 254          | 174         | 9,544   |
| 1920.....                | 4,072     | 1,237    | 1,554         | 1,115       | 687        | 283         | 40        | 107          | 426          | 226         | 9,747   |
| 1921.....                | 4,429     | 1,545    | 1,482         | 922         | 559        | 314         | 71        | 91           | 345          | 196         | 9,854   |
| 6-year average....       | 4,564     | 1,246    | 1,526         | 1,140       | 631        | 278         | 55        | 108          | 364          | 177         | 10,059  |
| <b>Peaches:</b>          |           |          |               |             |            |             |           |              |              |             |         |
| 1916.....                | 3,395     | 929      | 1,084         | 1,459       | 347        | 499         | 84        | 210          | 139          | 123         | 8,269   |
| 1917.....                | 3,620     | 1,087    | 827           | 1,167       | 345        | 495         | 69        | 190          | 292          | 120         | 8,195   |
| 1918.....                | 3,633     | 1,060    | 892           | 1,010       | 188        | 415         | 87        | 89           | 305          | 138         | 7,771   |
| 1919.....                | 3,985     | 1,357    | 944           | 1,221       | 324        | 631         | 128       | 112          | 255          | 158         | 9,105   |
| 1920.....                | 3,506     | 1,267    | 847           | 849         | 347        | 481         | 36        | 64           | 158          | 263         | 7,815   |
| 1921.....                | 4,148     | 1,326    | 1,056         | 759         | 481        | 600         | 77        | 101          | 288          | 145         | 8,659   |
| 6-year average....       | 3,714     | 1,168    | 942           | 1,078       | 341        | 520         | 82        | 127          | 224          | 158         | 8,353   |
| <b>Potatoes (white):</b> |           |          |               |             |            |             |           |              |              |             |         |
| 1916.....                | 20,629    | 12,125   | 6,568         | 7,327       | 2,887      | 1,010       | 725       | 1,056        | 2,522        | 417         | 55,546  |
| 1917.....                | 20,601    | 9,609    | 6,441         | 5,185       | 2,904      | 1,573       | 410       | 1,196        | 2,546        | 439         | 50,904  |
| 1918.....                | 19,330    | 12,477   | 6,823         | 6,516       | 2,739      | 1,535       | 125       | 397          | 2,602        | 1,213       | 53,760  |
| 1919.....                | 15,378    | 12,158   | 7,068         | 7,326       | 2,756      | 2,047       | 150       | 498          | 2,521        | 1,000       | 54,592  |
| 1920.....                | 17,424    | 11,302   | 7,190         | 5,614       | 2,512      | 2,189       | 487       | 756          | 2,145        | 855         | 50,454  |
| 1921.....                | 17,986    | 13,077   | 7,460         | 5,396       | 3,592      | 2,857       | 594       | 845          | 2,237        | 1,153       | 55,217  |
| 6-year average....       | 19,058    | 11,791   | 7,025         | 6,227       | 2,895      | 1,969       | 407       | 791          | 2,432        | 851         | 53,447  |
| <b>Strawberries:</b>     |           |          |               |             |            |             |           |              |              |             |         |
| 1916.....                | 2,780     | 1,669    | 585           | 644         | 181        | 251         | 180       | 318          | 221          | 7           | 6,836   |
| 1917.....                | 2,771     | 910      | 679           | 435         | 89         | 257         | 82        | 199          | 173          | 10          | 5,635   |
| 1918.....                | 1,206     | 876      | 304           | 271         | 77         | 255         | 52        | 119          | 100          | 15          | 3,278   |
| 1919.....                | 898       | 1,246    | 249           | 166         | 45         | 232         | 58        | 101          | 50           | 30          | 3,069   |
| 1920.....                | 1,202     | 909      | 291           | 185         | 65         | 80          | 49        | 84           | 68           | 75          | 3,028   |
| 1921.....                | 1,101     | 1,499    | 300           | 321         | 132        | 356         | 72        | 147          | 180          | 30          | 4,158   |
| 6-year average....       | 1,600     | 1,185    | 400           | 337         | 102        | 244         | 82        | 161          | 132          | 35          | 4,337   |
| <b>Tomatoes:</b>         |           |          |               |             |            |             |           |              |              |             |         |
| 1916.....                | 2,917     | 1,425    | 1,049         | 1,364       | 345        | 439         | 61        | 125          | 300          | 134         | 8,162   |
| 1917.....                | 3,310     | 1,333    | 696           | 945         | 237        | 347         | 27        | 75           | 266          | 105         | 7,341   |
| 1918.....                | 3,229     | 1,008    | 695           | 1,016       | 64         | 181         | 39        | 64           | 185          | 115         | 6,069   |
| 1919.....                | 2,986     | 1,020    | 943           | 993         | 178        | 202         | 24        | 50           | 235          | 158         | 6,769   |
| 1920.....                | 3,153     | 1,199    | 826           | 765         | 220        | 218         | 15        | 49           | 214          | 180         | 6,889   |
| 1921.....                | 2,872     | 1,588    | 1,105         | 919         | 327        | 287         | 34        | 55           | 262          | 193         | 7,645   |
| 6-year average....       | 3,078     | 1,262    | 896           | 1,000       | 229        | 281         | 33        | 70           | 244          | 148         | 7,231   |
| <b>Total:</b>            |           |          |               |             |            |             |           |              |              |             |         |
| 1916.....                | 50,074    | 25,844   | 16,691        | 18,671      | 9,153      | 5,315       | 1,887     | 2,974        | 5,123        | 1,635       | 137,367 |
| 1917.....                | 48,356    | 20,334   | 14,782        | 13,444      | 7,734      | 4,497       | 1,053     | 2,618        | 5,407        | 1,400       | 119,545 |
| 1918.....                | 49,158    | 23,033   | 15,339        | 15,710      | 6,301      | 4,771       | 840       | 1,481        | 4,368        | 2,834       | 124,415 |
| 1919.....                | 47,767    | 27,026   | 16,771        | 15,772      | 6,181      | 5,942       | 793       | 1,412        | 4,918        | 2,444       | 129,026 |
| 1920.....                | 46,984    | 26,432   | 16,922        | 13,892      | 7,142      | 6,018       | 1,112     | 1,739        | 4,812        | 2,878       | 127,881 |
| 1921.....                | 50,326    | 29,635   | 18,039        | 13,552      | 8,535      | 7,533       | 1,382     | 1,905        | 5,166        | 2,737       | 138,810 |
| 6-year average....       | 48,789    | 25,354   | 16,424        | 15,174      | 7,508      | 5,674       | 1,178     | 2,022        | 5,054        | 2,321       | 129,567 |

<sup>1</sup> Reports incomplete.

<sup>2</sup> An additional 306 cars received in L. C. L. receipts.

<sup>3</sup> Including incomplete reports of 1917.

<sup>4</sup> An additional 74 cars received in L. C. L. receipts.

<sup>5</sup> An additional 1,754 cars received in L. C. L. receipts.

<sup>6</sup> An additional 822 cars received in L. C. L. receipts.

<sup>7</sup> An additional 512 cars received in L. C. L. receipts.

<sup>8</sup> An additional 3,825 cars received in L. C. L. receipts.

## FRUITS AND VEGETABLES—Continued.

TABLE 268.—Monthly and yearly carlot shipments of 14 commodities (fruits and vegetables) in the United States, 1917–1921.

| Crop and year.           | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Total.  |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| <b>Apples:</b>           |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                | 2,330  | 2,153  | 2,175  | 1,239  | 965    | 301    | 755    | 1,308  | 5,719  | 21,895 | 14,165 | 3,983  | 57,043  |
| 1918.....                | 2,362  | 3,232  | 2,882  | 1,647  | 347    | 229    | 1,149  | 2,359  | 8,070  | 26,680 | 13,563 | 6,320  | 68,840  |
| 1919.....                | 4,044  | 3,679  | 2,063  | 1,006  | 430    | 189    | 1,349  | 2,712  | 12,259 | 32,668 | 15,854 | 5,301  | 81,552  |
| 1920.....                | 4,393  | 4,419  | 4,373  | 2,229  | 1,276  | 262    | 1,855  | 3,861  | 11,043 | 37,234 | 23,087 | 8,575  | 102,962 |
| 1921.....                | 6,046  | 6,068  | 5,695  | 2,819  | 1,476  | 401    | 1,222  | 3,405  | 13,126 | 34,498 | 14,458 | 5,990  | 95,837  |
| <b>Cabbage:</b>          |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                | 1,286  | 463    | 503    | 457    | 1,634  | 2,121  | 753    | 1,015  | 2,505  | 6,078  | 2,501  | 1,038  | 20,354  |
| 1918.....                | 1,498  | 1,735  | 1,790  | 3,679  | 3,734  | 1,594  | 645    | 1,305  | 3,231  | 5,051  | 3,293  | 1,371  | 28,661  |
| 1919.....                | 2,182  | 2,017  | 1,977  | 1,831  | 2,469  | 1,438  | 557    | 1,152  | 2,465  | 5,127  | 2,411  | 1,346  | 24,982  |
| 1920.....                | 1,931  | 2,518  | 3,328  | 3,935  | 2,941  | 1,508  | 612    | 1,095  | 1,701  | 5,399  | 4,607  | 1,851  | 31,020  |
| 1921.....                | 2,832  | 2,293  | 2,929  | 4,101  | 3,430  | 1,727  | 459    | 1,393  | 2,791  | 5,411  | 2,609  | 2,044  | 32,039  |
| <b>Cantaloupes:</b>      |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                |        |        |        |        |        |        | 3,463  | 5,852  | 5,564  | 2,184  | 306    | 23     | 17,430  |
| 1918.....                |        |        |        |        |        | 51     | 4,348  | 3,949  | 3,922  | 1,339  | 10     |        | 13,619  |
| 1919.....                |        |        |        |        |        | 69     | 6,302  | 7,144  | 4,755  | 2,834  | 336    |        | 22,039  |
| 1920.....                |        |        |        |        |        | 475    | 6,781  | 5,318  | 6,987  | 2,784  | 152    |        | 22,377  |
| 1921.....                |        |        |        |        |        | 638    | 7,974  | 8,058  | 5,990  | 2,153  | 171    | 12     | 25,574  |
| <b>Celery:</b>           |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1919.....                | 616    | 546    | 722    | 412    | 507    | 32     | 44     | 141    | 258    | 875    | 1,210  | 1,086  | 6,449   |
| 1920.....                | 816    | 1,047  | 1,206  | 708    | 329    | 21     | 69     | 150    | 421    | 1,257  | 1,811  | 1,433  | 9,308   |
| 1921.....                | 1,675  | 1,746  | 1,754  | 806    | 255    | 105    | 137    | 263    | 515    | 1,760  | 1,440  | 1,905  | 12,428  |
| <b>Grapes:</b>           |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1919.....                |        |        |        |        |        |        | 4      | 480    | 2,837  | 13,023 | 11,592 | 2,423  | 30,340  |
| 1920.....                |        |        |        |        |        |        | 12     | 366    | 4,647  | 12,001 | 19,358 | 2,808  | 33,205  |
| 1921.....                |        |        |        |        |        |        | 12     | 425    | 3,169  | 16,670 | 14,632 | 1,974  | 36,558  |
| <b>Lettuce:</b>          |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1919.....                | 757    | 717    | 829    | 1,090  | 831    | 131    | 395    | 695    | 653    | 358    | 565    | 937    | 8,013   |
| 1920.....                | 2,025  | 1,622  | 1,353  | 1,063  | 1,172  | 365    | 989    | 924    | 822    | 593    | 1,388  | 1,401  | 13,821  |
| 1921.....                | 2,356  | 1,934  | 2,219  | 1,974  | 1,067  | 670    | 1,399  | 1,140  | 1,302  | 1,249  | 1,560  | 1,765  | 18,685  |
| <b>Onions:</b>           |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                | 986    | 355    | 232    | 2,679  | 2,960  | 1,156  | 678    | 1,434  | 2,740  | 4,068  | 1,348  | 516    | 19,152  |
| 1918.....                | 901    | 1,062  | 1,033  | 1,799  | 2,290  | 1,141  | 1,177  | 1,021  | 3,075  | 4,211  | 2,410  | 1,017  | 22,027  |
| 1919.....                | 1,488  | 1,213  | 949    | 1,189  | 2,462  | 646    | 1,844  | 1,909  | 3,522  | 2,963  | 1,702  | 987    | 20,874  |
| 1920.....                | 1,388  | 1,159  | 999    | 1,938  | 4,242  | 607    | 1,030  | 1,918  | 3,675  | 4,910  | 2,918  | 1,188  | 25,950  |
| 1921.....                | 2,038  | 1,769  | 1,724  | 2,511  | 2,559  | 823    | 1,432  | 2,048  | 3,361  | 2,637  | 1,245  | 1,162  | 23,359  |
| <b>Peaches:</b>          |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                |        |        |        |        | 41     | 1,294  | 5,149  | 5,743  | 11,031 | 3,963  | 11     |        | 27,237  |
| 1918.....                |        |        |        |        | 1,119  | 4,021  | 6,338  | 5,185  | 3,625  | 123    |        |        | 20,409  |
| 1919.....                |        |        |        |        | 328    | 3,513  | 9,216  | 11,277 | 6,458  | 104    |        |        | 30,923  |
| 1920.....                |        |        |        |        | 45     | 1,588  | 6,331  | 6,294  | 10,528 | 1,638  | 3      |        | 26,907  |
| 1921.....                |        |        |        |        | 1,429  | 3,965  | 9,335  | 7,178  | 5,107  | 32     |        |        | 27,066  |
| <b>Pears:</b>            |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1919.....                | 11     | 1      |        |        |        |        | 1,954  | 3,890  | 2,753  | 1,399  | 190    | 40     | 10,158  |
| 1920.....                |        |        | 8      | 3      |        | 23     | 2,417  | 3,079  | 4,850  | 3,634  | 779    | 157    | 14,950  |
| 1921.....                | 49     | 29     | 20     |        |        |        | 1,512  | 5,538  | 3,976  | 1,279  | 286    | 83     | 12,772  |
| <b>Potatoes (sweet):</b> |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1919.....                | 1,123  | 939    | 745    | 220    | 12     | 6      | 44     | 1,228  | 2,904  | 2,721  | 2,311  | 1,452  | 13,725  |
| 1920.....                | 1,368  | 959    | 1,150  | 817    | 480    | 44     | 92     | 696    | 2,800  | 2,333  | 2,638  | 1,882  | 19,254  |
| 1921.....                | 2,035  | 1,624  | 1,506  | 792    | 434    | 78     | 243    | 1,936  | 2,943  | 3,404  | 2,022  | 2,026  | 19,041  |
| <b>Potatoes (white):</b> |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                | 10,331 | 8,418  | 6,083  | 8,471  | 9,746  | 14,719 | 15,488 | 12,910 | 14,292 | 23,542 | 13,536 | 7,120  | 144,656 |
| 1918.....                | 9,459  | 10,943 | 12,553 | 11,528 | 12,720 | 16,859 | 14,156 | 11,305 | 19,811 | 24,902 | 15,442 | 8,801  | 169,264 |
| 1919.....                | 12,753 | 8,998  | 12,744 | 13,429 | 9,833  | 13,303 | 13,855 | 13,626 | 22,287 | 32,535 | 17,302 | 9,532  | 181,277 |
| 1920.....                | 12,838 | 8,725  | 12,772 | 8,445  | 6,960  | 14,777 | 15,622 | 13,582 | 18,155 | 31,622 | 25,075 | 9,755  | 178,283 |
| 1921.....                | 14,406 | 11,970 | 16,154 | 14,893 | 14,987 | 17,645 | 17,041 | 16,115 | 26,040 | 43,250 | 16,738 | 10,499 | 219,438 |
| <b>Strawberries:</b>     |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                |        |        |        | 97     | 1,333  | 6,506  | 6,439  | 640    |        |        |        |        | 15,065  |
| 1918.....                |        |        | 11     | 355    | 1,122  | 5,321  | 1,417  | 177    | 31     | 18     |        |        | 8,452   |
| 1919.....                |        |        |        | 49     | 911    | 4,598  | 2,265  | 147    | 101    | 24     |        |        | 8,105   |
| 1920.....                |        |        |        | 44     | 887    | 3,511  | 3,473  | 403    | 112    | 58     | 2      |        | 8,490   |
| 1921.....                | 10     | 40     | 675    | 2,128  | 6,062  | 1,763  | 29     | 11     | 13     | 9      | 1      |        | 10,681  |
| <b>Tomatoes:</b>         |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1917.....                | 115    | 74     | 22     | 514    | 2,961  | 2,838  | 2,364  | 1,894  | 1,868  | 1,056  | 94     | 15     | 14,115  |
| 1918.....                |        | 13     | 487    | 1,448  | 1,568  | 3,028  | 1,907  | 2,124  | 2,171  | 1,361  | 283    | 23     | 15,471  |
| 1919.....                | 39     | 109    | 874    | 1,027  | 1,924  | 3,070  | 1,471  | 850    | 2,798  | 1,899  | 403    | 39     | 14,503  |
| 1920.....                | 268    | 472    | 1,940  | 468    | 763    | 3,189  | 2,189  | 1,594  | 3,639  | 1,491  | 216    | 26     | 15,556  |
| 1921.....                | 33     | 273    | 988    | 1,688  | 2,754  | 4,392  | 1,801  | 1,071  | 2,533  | 847    | 428    | 53     | 17,169  |
| <b>Watermelons:</b>      |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1919.....                |        |        |        |        | 299    | 4,986  | 15,011 | 8,856  | 1,677  | 29     | 2      |        | 30,890  |
| 1920.....                |        |        |        |        | 18     | 6,417  | 20,109 | 10,290 | 2,174  | 64     | 13     | 65     | 39,255  |
| 1921.....                |        |        |        |        | 7      | 1,086  | 11,248 | 19,872 | 15,243 | 1,952  | 70     |        | 46,493  |

## SUGAR.

TABLE 269.—Sugar: Production in the United States and its possessions, 1856-57 to 1921-22.<sup>1</sup>

Data for 1912-13 and subsequently beet sugar, also Louisiana and Hawaii cane sugar, estimated by United States Department of Agriculture. Porto Rico, by Treasury Department of Porto Rico; Philippine Islands, production estimated by the Philippine Department of Agriculture and exports for years ending June 30. For sources of data for earlier years, see Yearbook for 1912, p. 650. A short ton is 2,000 pounds.

| Year.                     | Beet sugar<br>(chiefly refined). | Cane sugar (chiefly raw). |                            |             |             |                                  | Total.      |
|---------------------------|----------------------------------|---------------------------|----------------------------|-------------|-------------|----------------------------------|-------------|
|                           |                                  | Louisiana.                | Other States. <sup>2</sup> | Porto Rico. | Hawaii.     | Philippine Islands. <sup>3</sup> |             |
| Average:                  | Short tons.                      | Short tons.               | Short tons.                | Short tons. | Short tons. | Short tons.                      | Short tons. |
| 1856-57 to 1860-61.....   | .....                            | 132,402                   | 5,978                      | 75,364      | .....       | 48,446                           | 260,180     |
| 1861-62 to 1865-66.....   | 269                              | 74,038                    | 1,945                      | 71,765      | .....       | 54,483                           | 202,503     |
| 1866-67 to 1870-71.....   | 448                              | 44,768                    | 3,818                      | 96,114      | .....       | 81,455                           | 226,633     |
| 1871-72 to 1875-76.....   | 403                              | 67,341                    | 4,113                      | 87,606      | (4)         | 119,557                          | 279,020     |
| 1876-77 to 1880-81.....   | 470                              | 104,920                   | 5,327                      | 76,579      | 27,040      | 188,067                          | 383,403     |
| 1881-82 to 1885-86.....   | 692                              | 124,868                   | 7,280                      | 87,441      | 76,075      | 198,277                          | 485,833     |
| 1886-87 to 1890-91.....   | 1,922                            | 163,049                   | 8,439                      | 70,112      | 125,440     | 196,129                          | 555,091     |
| 1891-92 to 1895-96.....   | 19,406                           | 268,656                   | 6,634                      | 63,280      | 162,533     | 296,629                          | 807,142     |
| 1896-97 to 1900-1901..... | 58,287                           | 282,399                   | 4,405                      | 61,292      | 232,553     | 134,722                          | 823,690     |
| 1901-2 to 1905-6.....     | 239,730                          | 352,053                   | 12,126                     | 141,478     | 403,308     | 108,973                          | 1,267,673   |
| 1906-7 to 1910-11.....    | 479,153                          | 348,544                   | 13,664                     | 282,136     | 516,041     | 145,832                          | 1,785,370   |
| 1901-2.....               | 184,606                          | 360,277                   | 4,048                      | 103,152     | 355,611     | 75,011                           | 1,082,705   |
| 1902-3.....               | 218,406                          | 368,734                   | 4,169                      | 100,676     | 437,991     | 123,108                          | 1,252,984   |
| 1903-4.....               | 240,604                          | 255,894                   | 22,176                     | 138,096     | 367,475     | 82,855                           | 1,107,100   |
| 1904-5.....               | 242,113                          | 398,195                   | 16,800                     | 151,088     | 426,248     | 125,271                          | 1,359,715   |
| 1905-6.....               | 312,921                          | 377,162                   | 13,440                     | 214,480     | 429,213     | 138,645                          | 1,485,861   |
| 1906-7.....               | 483,612                          | 257,600                   | 14,560                     | 206,864     | 440,017     | 132,602                          | 1,535,255   |
| 1907-8.....               | 463,628                          | 380,800                   | 13,440                     | 230,095     | 521,123     | 167,242                          | 1,776,328   |
| 1908-9.....               | 435,884                          | 397,600                   | 16,800                     | 277,083     | 535,156     | 123,576                          | 1,776,409   |
| 1909-10.....              | 512,469                          | 364,000                   | 11,200                     | 346,786     | 517,090     | 140,738                          | 1,892,323   |
| 1910-11.....              | 510,172                          | 342,720                   | 12,320                     | 349,840     | 566,821     | 164,658                          | 1,946,531   |
| 1911-12.....              | 599,500                          | 352,874                   | 8,000                      | 371,076     | 595,068     | 205,046                          | 2,131,534   |
| 1912-13.....              | 692,556                          | 153,573                   | 9,000                      | 398,004     | 546,524     | 345,077                          | 2,144,734   |
| 1913-14.....              | 733,401                          | 292,698                   | 7,800                      | 351,666     | 612,000     | 408,339                          | 2,405,904   |
| 1914-15.....              | 722,054                          | 242,700                   | 8,920                      | 346,490     | 646,000     | 421,192                          | 2,382,356   |
| 1915-16.....              | 874,220                          | 137,500                   | 1,120                      | 483,590     | 592,763     | 412,274                          | 2,501,467   |
| 1916-17.....              | 820,657                          | 303,900                   | 7,000                      | 503,081     | 644,663     | 425,266                          | 2,704,567   |
| 1917-18.....              | 765,207                          | 243,600                   | 2,240                      | 453,794     | 576,700     | 474,745                          | 2,516,286   |
| 1918-19.....              | 760,950                          | 230,900                   | 3,500                      | 406,002     | 600,312     | 453,346                          | 2,505,010   |
| 1919-20.....              | 726,451                          | 121,000                   | 1,125                      | 485,071     | 556,343     | 466,912                          | 2,356,902   |
| 1920-21.....              | 1,089,021                        | 109,127                   | 6,987                      | 489,818     | 521,759     | 608,499                          | 2,885,211   |
| 1921-22.....              | 1,020,489                        | 324,431                   | 3,270                      | .....       | .....       | .....                            | .....       |

<sup>1</sup> Census returns give production of beet sugar for 1899 as 81,729 short tons; for 1904, 253,921; 1909, 501,682; production of cane sugar in Louisiana for 1839, 59,974 short tons; 1849, 226,001 hogsheds; 1859, 221,726 hogsheds; 1869, 80,706 hogsheds; 1879, 171,706 hogsheds; 1889, 146,062 short tons; 1899, 278,497 short tons; 1899, 159,588; and 1909, 325,516 short tons; cane sugar in other States, 1839, 491 short tons; in 1849, 21,576 hogsheds; in 1859, 9,256 hogsheds; in 1869, 6,337 hogsheds; in 1879, 7,166 hogsheds; in 1889, 4,580 short tons; in 1899, 1,691; and in 1909, 8,687 short tons.

<sup>2</sup> Includes Texas only, subsequent to 1902-3. Unofficial returns prior to 1918-19.

<sup>3</sup> Exports for years ending June 30.

<sup>4</sup> Complete data not available for this period. Production in 1878-79, 1,254 short tons; in 1879-80, 1,304 short tons.

<sup>5</sup> Production.

## SUGAR—Continued.

TABLE 270.—Sugar beets and beet sugar: Production in the United States, 1912–1921.

| Item and year.                               | Area and production of sugar beets. <sup>1</sup> |                |        |                |                     |       |        |                      |                  |                   |
|--|--|----------------|--------|----------------|---------------------|-------|--------|----------------------|------------------|-------------------|
|  | Cali-<br>fornia.                                 | Colo-<br>rado. | Idaho. | Michi-<br>gan. | Ne-<br>bras-<br>ka. | Ohio. | Utah.  | Wis-<br>con-<br>sin. | Other<br>States. | United<br>States. |
| Planted (1,000 acres):                       |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 136  | 254            | 58     | 164            | 79                  | 54    | 116    | 29                   | 88               | 978               |
| 1921.....                                    | 136  | 214            | 53     | 164            | 72                  | 36    | 111    | 18                   | 78               | 882               |
| Harvested (1,000 acres):                     |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 123  | 220            | 45     | 150            | 72                  | 49    | 118    | 21                   | 79               | 872               |
| 1921.....                                    | 121  | 200            | 41     | 148            | 72                  | 33    | 112    | 17                   | 71               | 815               |
| Per cent of planted:                         |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 90.50  | 86.69          | 78.32  | 91.31          | 91.63               | 91.28 | 96.96  | 71.33                | 88.54            | 89.08             |
| 1921.....                                    | 88.91  | 93.48          | 78.56  | 90.26          | 100.66              | 91.20 | 101.21 | 91.48                | 89.63            | 92.36             |
| Beets paid for (1,000 short<br>tons):        |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 1,074  | 2,325          | 396    | 1,313          | 718                 | 436   | 1,390  | 190                  | 696              | 8,538             |
| 1921.....                                    | 1,046  | 2,279          | 380    | 1,153          | 773                 | 264   | 1,152  | 148                  | 588              | 7,782             |
| Yield per acre (short tons):                 |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 8.74   | 10.58          | 8.77   | 8.78           | 9.93                | 8.86  | 12.35  | 9.19                 | 8.75             | 9.79              |
| 1921.....                                    | 8.67   | 11.39          | 9.18   | 7.80           | 10.72               | 8.10  | 10.26  | 8.82                 | 8.23             | 9.55              |
| Farm value (1,000 dollars):                  |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 14,096   | 27,627         | 4,787  | 13,236         | 8,587               | 4,313 | 16,713 | 1,940                | 8,026            | 99,324            |
| 1921.....                                    | 7,841  | 14,316         | 2,280  | 7,002          | 5,076               | 1,553 | 6,341  | 1,034                | 3,681            | 49,154            |
| Price to growers per short ton<br>(dollars): |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 13.13  | 11.88          | 12.10  | 10.08          | 11.96               | 9.89  | 12.03  | 10.20                | 11.52            | 11.63             |
| 1921.....                                    | 7.50   | 6.28           | 6.00   | 6.07           | 6.57                | 6.00  | 5.51   | 7.00                 | 6.26             | 6.32              |
| Factories operating (number):                |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 10   | 17             | 8      | 17             | 5                   | 5     | 18     | 5                    | 12               | 97                |
| 1921.....                                    | 9  | 15             | 7      | 17             | 5                   | 5     | 18     | 5                    | 11               | 92                |
| Average length of campaign<br>(days):        |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920.....                                    | 90   | 98             | 72     | 87             | 110                 | 100   | 102    | 80                   | 70               | 91                |
| 1921.....                                    | 84   | 95             | 60     | 71             | 106                 | 62    | 78     | 51                   | 60               | 76                |
| Sugar made (chiefly refined):                |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (1,000 short tons).....                 | 168  | 294            | 57     | 166            | 90                  | 47    | 163    | 21                   | 83               | 1,089             |
| 1921 (1,000 short tons).....                 | 171  | 285            | 57     | 122            | 105                 | 26    | 156    | 14                   | 74               | 1,020             |
| Sugar beets used:                            |  |                |        |                |                     |       |        |                      |                  |                   |
| Area harvested—                              |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (1,000 acres).....                      | 123  | 220            | 45     | 150            | 72                  | 49    | 113    | 21                   | 79               | 872               |
| 1921 (1,000 acres).....                      | 121  | 200            | 41     | 148            | 72                  | 33    | 112    | 17                   | 71               | 815               |
| Average yield per acre—                      |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (short tons).....                       | 8.56   | 9.85           | 8.97   | 8.32           | 9.26                | 7.77  | 11.20  | 8.16                 | 8.07             | 9.17              |
| 1921 (short tons).....                       | 8.62   | 10.79          | 8.57   | 7.55           | 10.12               | 7.61  | 9.66   | 7.96                 | 7.69             | 9.10              |
| Beets worked—                                |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (1,000 short tons).....                 | 1,052  | 2,166          | 405    | 1,244          | 670                 | 382   | 1,261  | 169                  | 642              | 7,991             |
| 1921 (1,000 short tons).....                 | 1,040  | 2,159          | 355    | 1,117          | 730                 | 248   | 1,064  | 133                  | 548              | 7,414             |
| Analysis of beets:                           |  |                |        |                |                     |       |        |                      |                  |                   |
| Percentage of sucrose—                       |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (per cent).....                         | 17.66  | 15.81          | 16.26  | 15.79          | 15.74               | 15.44 | 15.62  | 15.86                | 15.46            | 15.99             |
| 1921 (per cent).....                         | 17.80  | 15.66          | 17.45  | 13.28          | 16.60               | 13.41 | 16.52  | 13.47                | 15.41            | 15.77             |
| Purity coefficient—                          |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (per cent).....                         | 81.44  | 85.15          | 86.42  | 84.04          | 83.94               | 82.45 | 84.27  | 82.53                | 83.12            | 83.96             |
| 1921 (per cent).....                         | 81.46  | 83.28          | 86.54  | 81.68          | 84.55               | 81.41 | 84.72  | 82.11                | 81.89            | 83.09             |
| Recovery of sucrose:                         |  |                |        |                |                     |       |        |                      |                  |                   |
| Percentage of weight of<br>beets—            |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (per cent).....                         | 15.97  | 13.60          | 13.98  | 13.34          | 13.37               | 12.31 | 12.89  | 12.40                | 13.06            | 13.63             |
| 1921 (per cent).....                         | 16.48  | 13.66          | 15.99  | 10.95          | 14.43               | 10.46 | 14.37  | 10.59                | 13.50            | 13.76             |
| Percentage of sucrose in<br>beets—           |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (per cent).....                         | 90.43  | 86.02          | 85.98  | 84.48          | 84.94               | 79.73 | 82.52  | 78.18                | 84.48            | 85.24             |
| 1921 (per cent).....                         | 92.58  | 87.23          | 91.63  | 82.45          | 86.93               | 78.00 | 86.99  | 78.62                | 87.61            | 87.25             |
| Loss:  |  |                |        |                |                     |       |        |                      |                  |                   |
| 1920 (per cent).....                         | 1.69   | 2.21           | 2.28   | 2.45           | 2.37                | 3.13  | 2.73   | 3.46                 | 2.40             | 2.36              |
| 1921 (per cent).....                         | 1.32   | 2.00           | 1.46   | 2.33           | 2.17                | 2.95  | 2.15   | 2.88                 | 1.91             | 2.01              |

<sup>1</sup> Acreage and production of beets are credited, as in former reports, to the State in which the beets were made into sugar.

SUGAR—Continued.

TABLE 270.—*Sugar beets and beet sugar: Production in the United States, 1912-1921—Continued.*

| Item.   | United States. |        |        |        |        |        |        |        |        |        |
|---|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   | 1912           | 1913   | 1914   | 1915   | 1916   | 1917   | 1918   | 1919   | 1920   | 1921   |
| Planted (1,000 acres).....                          | -----          | 635    | 515    | 664    | 768    | 807    | 690    | 890    | 978    | 882    |
| Harvested (1,000 acres).....                        | 555            | 580    | 483    | 611    | 665    | 665    | 594    | 692    | 872    | 815    |
| Per cent of planted.....                            | -----          | 91.33  | 93.94  | 92.02  | 86.57  | 82.42  | 86.13  | 77.77  | 89.15  | 91.73  |
| Beets paid for (1,000 tons).....                    | 5,645          | 5,886  | 5,585  | 6,511  | 6,223  | 5,950  | 5,949  | 6,421  | 8,538  | 7,782  |
| Yield per acre (tons).....                          | 10.20          | 10.10  | 11.60  | 10.70  | 9.36   | 9.00   | 10.01  | 9.27   | 9.79   | 9.55   |
| Farm value (1,000 dollars).....                     | 32,871         | 33,491 | 30,438 | 36,950 | 38,139 | 44,192 | 50,494 | 75,420 | 90,324 | 49,154 |
| Price to growers per ton (dollars).....             | 5.82           | 5.69   | 5.45   | 5.67   | 6.12   | 7.39   | 10.00  | 11.74  | 11.63  | 6.32   |
| Factories operating (number).....                   | 73             | 71     | 60     | 67     | 74     | 91     | 89     | 89     | 97     | 92     |
| Average length of campaign (days).....              | 86             | 85     | 85     | 92     | 80     | 74     | 81     | 78     | 91     | 76     |
| Sugar made, chiefly refined (1,000 short tons)..... | 693            | 733    | 722    | 874    | 821    | 765    | 761    | 726    | 1,089  | 1,020  |
| Sugar beets used:                                   |                |        |        |        |        |        |        |        |        |        |
| Area harvested (1,000 acres).....                   | 555            | 580    | 483    | 611    | 665    | 665    | 594    | 692    | 872    | 815    |
| Average yield per acre (short tons).....            | 9.41           | 9.76   | 10.90  | 10.10  | 8.90   | 8.46   | 9.39   | 8.50   | 9.17   | 9.10   |
| Beets worked (1,000 short tons).....                | 5,224          | 5,559  | 5,288  | 6,150  | 5,920  | 5,626  | 5,578  | 5,888  | 7,991  | 7,414  |
| Analysis of beet:                                   |                |        |        |        |        |        |        |        |        |        |
| Percentage of sucrose <sup>2</sup> .....            | 16.31          | 15.73  | 16.38  | 16.49  | 16.80  | 16.28  | 16.18  | 14.45  | 15.99  | 15.77  |
| Purity coefficient <sup>3</sup> (per cent).....     | 84.49          | 83.22  | 83.89  | 84.36  | 84.74  | 83.89  | 84.70  | 82.84  | 83.96  | 83.09  |
| Recovery of sucrose: <sup>4</sup>                   |                |        |        |        |        |        |        |        |        |        |
| Percentage of weight of beet.....                   | 13.28          | 12.96  | 13.65  | 14.21  | 13.86  | 13.60  | 13.64  | 12.34  | 13.63  | 13.76  |
| Percentage of sucrose in beets.....                 | 81.30          | 82.13  | 83.33  | 86.17  | 85.08  | 83.54  | 84.30  | 85.22  | 85.24  | 87.25  |
| Loss (per cent) <sup>5</sup> .....                  | 3.05           | 2.82   | 2.73   | 2.28   | 2.44   | 2.68   | 2.54   | 2.14   | 2.36   | 2.01   |

<sup>2</sup> Based upon weight of beets.

<sup>3</sup> Percentage of sucrose (pure sugar) in the total soluble solids of the beets.

<sup>4</sup> Percentage of sucrose actually extracted by factories.

<sup>5</sup> Percentage of sucrose (based upon the weight of beets) remaining in molasses and pulp.

TABLE 271.—*Cane-sugar production of Louisiana, 1911-1921.*

[Figures for 1920 are from returns made before the end of the season, and are subject to revision.]

| Year of cane harvest. | Factories in operation. | Sugar made.        | Average sugar made per ton of cane. | Cane used for sugar. |                    |                    | Molasses made. <sup>1</sup> |                   |
|-----------------------|-------------------------|--------------------|-------------------------------------|----------------------|--------------------|--------------------|-----------------------------|-------------------|
|                       |                         |                    |                                     | Area.                | Average per acre.  | Production.        | Total.                      | Per ton of sugar. |
|                       | <i>Number.</i>          | <i>Short tons.</i> | <i>Pounds.</i>                      | <i>Acres.</i>        | <i>Short tons.</i> | <i>Short tons.</i> | <i>Gallons.</i>             | <i>Gallons.</i>   |
| 1911.....             | 188                     | 352,874            | 120                                 | 310,000              | 19                 | 5,887,292          | 35,062,525                  | 99                |
| 1912.....             | 126                     | 153,573            | 142                                 | 197,000              | 11                 | 2,162,574          | 14,302,169                  | 93                |
| 1913.....             | 153                     | 292,698            | 139                                 | 248,000              | 17                 | 4,214,000          | 24,046,320                  | 82                |
| 1914.....             | 149                     | 242,700            | 152                                 | 213,000              | 15                 | 3,199,000          | 17,177,443                  | 71                |
| 1915.....             | 136                     | 137,500            | 135                                 | 183,000              | 11                 | 2,018,000          | 12,748,000                  | 93                |
| 1916.....             | 150                     | 308,900            | 149                                 | 221,000              | 18                 | 4,072,000          | 26,154,000                  | 86                |
| 1917.....             | 140                     | 243,600            | 128                                 | 244,000              | 15.6               | 3,813,000          | 30,728,000                  | 126               |
| 1918.....             | 134                     | 280,900            | 135                                 | 231,200              | 18                 | 4,170,000          | 28,049,000                  | 100               |
| 1919.....             | 121                     | 121,000            | 129                                 | 179,900              | 10.5               | 1,583,000          | 12,991,000                  | 107               |
| 1920.....             | 122                     | 169,127            | 136.1                               | 182,843              | 13.6               | 2,492,524          | 16,856,867                  | 100               |
| 1921.....             | 124                     | 324,431            | 155.2                               | 226,366              | 18.5               | 4,180,780          | 25,423,341                  | 78                |

<sup>1</sup> Figures for molasses, 1911-1914, are as reported by the Louisiana Sugar Planters' Association; figures for later years as reported by the Bureau of Markets and Crop Estimates, U. S. Department of Agriculture.



## SUGAR—Continued.

TABLE 272.—Area of sugar cane and production of cane sirup, United States, 1920 and 1921.

| State.              | Total cane area. |               | Area harvested for sirup. |               | Sirup made.     |                 |
|---------------------|------------------|---------------|---------------------------|---------------|-----------------|-----------------|
|                     | 1921             | 1920          | 1921                      | 1920          | 1921            | 1920            |
|                     | <i>Acres.</i>    | <i>Acres.</i> | <i>Acres.</i>             | <i>Acres.</i> | <i>Gallons.</i> | <i>Gallons.</i> |
| South Carolina..... | 8,700            | 8,200         | 8,200                     | 7,800         | 820,000         | 858,000         |
| Georgia.....        | 61,100           | 53,100        | 45,200                    | 44,100        | 7,322,000       | 9,697,000       |
| Florida.....        | 34,000           | 28,000        | 30,000                    | 24,000        | 6,300,000       | 6,110,000       |
| Alabama.....        | 71,000           | 55,000        | 60,000                    | 42,000        | 8,760,000       | 7,665,000       |
| Mississippi.....    | 39,200           | 33,100        | 33,700                    | 28,300        | 7,553,000       | 7,358,000       |
| Louisiana.....      | 288,100          | 268,300       | 21,500                    | 18,300        | 7,053,000       | 4,640,000       |
| Texas.....          | 18,000           | 16,400        | 12,000                    | 7,100         | 3,192,000       | 2,215,000       |
| Arkansas.....       | 3,000            | 3,200         | 2,400                     | 2,500         | 437,000         | 437,000         |
| Total.....          | 523,100          | 465,300       | 213,000                   | 174,100       | 41,487,000      | 38,980,000      |

NOTE.—Care has been taken to exclude sorghum from the above estimates, since this crop is sometimes confused with sugar cane. The production of molasses (a by-product from sugar) in Louisiana is forecast at 22,598,000 gallons for 1921, as compared with 16,557,000 gallons in 1920.

TABLE 273.—Total and per capita sugar supply of the United States, 1901-1920.

The "supply" shown below consists of domestic production, plus imports, minus exports, and is quoted from the Statistical Abstract of the United States for 1919, pp. 560-561, for all years except 1919. Figures for 1919 are based upon the Bureau of Crop Estimates reports on production and the Bureau of Foreign and Domestic Commerce reports on exports and imports. The average per capita supply is computed from the Census estimates of population for June 1, each year. No allowance has been made for sugar carried over from one fiscal year to the next.

| Year ending June 30. | Supply ("consumption") of sugar.  |             | Year ending June 30. | Supply ("consumption") of sugar.  |             | Year ending June 30. | Supply ("consumption") of sugar.  |             | Year ending June 30.    | Supply ("consumption") of sugar.  |             |
|----------------------|-----------------------------------|-------------|----------------------|-----------------------------------|-------------|----------------------|-----------------------------------|-------------|-------------------------|-----------------------------------|-------------|
|                      | Total.                            | Per capita. |                      | Total.                            | Per capita. |                      | Total.                            | Per capita. |                         | Total.                            | Per capita. |
|                      | <i>Mil-<br/>lions<br/>of lbs.</i> | <i>Lbs.</i> |                      | <i>Mil-<br/>lions<br/>of lbs.</i> | <i>Lbs.</i> |                      | <i>Mil-<br/>lions<br/>of lbs.</i> | <i>Lbs.</i> |                         | <i>Mil-<br/>lions<br/>of lbs.</i> | <i>Lbs.</i> |
| 1901.....            | 5,535                             | 71.96       | 1906.....            | 6,491                             | 75.74       | 1911.....            | 7,236                             | 77.34       | 1916.....               | 7,960                             | 79.10       |
| 1902.....            | 5,619                             | 83.35       | 1907.....            | 7,060                             | 81.19       | 1912.....            | 7,862                             | 82.78       | 1917.....               | 8,468                             | 82.97       |
| 1903.....            | 6,330                             | 78.92       | 1908.....            | 6,591                             | 74.11       | 1913.....            | 8,324                             | 85.43       | 1918.....               | 8,090                             | 78.20       |
| 1904.....            | 5,662                             | 68.66       | 1909.....            | 7,289                             | 80.43       | 1914.....            | 8,794                             | 89.91       | 1919.....               | 8,727                             | 88.72       |
| 1905.....            | 5,026                             | 71.66       | 1910.....            | 7,890                             | 79.57       | 1915.....            | 8,627                             | 86.94       | 1920.....               | 9,736                             | 92.10       |
| Ave. 1901-1905.....  | 5,734                             | 70.91       | Ave. 1906-1910.....  | 6,963                             | 78.27       | Ave. 1911-1915.....  | 8,169                             | 84.48       | Ave. 1916-1920.....     | 8,596                             | 83.56       |
|                      |                                   |             |                      |                                   |             |                      |                                   |             | 1921 <sup>1</sup> ..... | 10,568                            | 98.65       |

<sup>1</sup> Preliminary.

SUGAR—Continued.

TABLE 274.—Cane sugar production of Hawaii, 1913-1920.

[Figures for 1920 are subject to revision.]

| Island, and year ending Sept. 30. | Average length of campaign. | Sugar made.        | Cane used for sugar. |                         |                    | Total area in cane. | Average extraction of sugar. |                        |
|-----------------------------------|-----------------------------|--------------------|----------------------|-------------------------|--------------------|---------------------|------------------------------|------------------------|
|                                   |                             |                    | Area harvested.      | Average yield per acre. | Production.        |                     | Per cent of cane.            | Per short ton of cane. |
| <b>Hawaii:</b>                    | <i>Days.</i>                | <i>Short tons.</i> | <i>Acres.</i>        | <i>Short tons.</i>      | <i>Short tons.</i> | <i>Acres.</i>       | <i>Per cent.</i>             | <i>Pounds.</i>         |
| 1921.....                         | 191                         | 195,267            | 52,600               | 34                      | 1,790,000          | 108,209             | 10.91                        | 213                    |
| 1920.....                         | 168                         | 186,062            | 50,800               | 31                      | 1,595,000          | 115,400             | 11.67                        | 233                    |
| <b>Kauai:</b>                     |                             |                    |                      |                         |                    |                     |                              |                        |
| 1921.....                         | 219                         | 83,569             | 19,800               | 45                      | 884,000            | 42,700              | 9.45                         | 189                    |
| 1920.....                         | 201                         | 104,938            | 21,900               | 41                      | 897,000            | 42,800              | 11.70                        | 234                    |
| <b>Mau:</b>                       |                             |                    |                      |                         |                    |                     |                              |                        |
| 1921.....                         | 177                         | 116,630            | 19,200               | 46                      | 876,000            | 38,500              | 13.31                        | 266                    |
| 1920.....                         | 138                         | 135,896            | 19,900               | 48                      | 947,000            | 44,300              | 14.35                        | 257                    |
| <b>Oahu:</b>                      |                             |                    |                      |                         |                    |                     |                              |                        |
| 1921.....                         | 243                         | 126,113            | 21,500               | 51                      | 1,107,000          | 47,100              | 11.39                        | 223                    |
| 1920.....                         | 220                         | 128,831            | 21,500               | 48                      | 1,034,000          | 45,400              | 12.46                        | 249                    |
| <b>Territory of Hawaii:</b>       |                             |                    |                      |                         |                    |                     |                              |                        |
| 1921.....                         | 202                         | 521,579            | 113,100              | 41                      | 4,657,000          | 236,500             | 11.20                        | 224                    |
| 1920.....                         | 175                         | 555,727            | 114,100              | 39                      | 4,473,000          | 247,900             | 12.42                        | 243                    |
| 1919.....                         | 178                         | 600,312            | 119,700              | 40                      | 4,744,000          | 238,900             | 12.65                        | 253                    |
| 1918.....                         | 184                         | 576,700            | 119,800              | 41                      | 4,855,000          | 276,800             | 11.88                        | 238                    |
| 1917.....                         | 190                         | 644,063            | 123,900              | 42                      | 5,220,000          | 245,100             | 12.35                        | 247                    |
| 1916.....                         | 180                         | 582,763            | 115,419              | 42                      | 4,859,424          | 246,332             | 12.20                        | 244                    |
| 1915.....                         | 195                         | 646,000            | 113,200              | 46                      | 5,185,000          | 239,800             | 12.46                        | 249                    |
| 1914.....                         | 183                         | 612,000            | 112,700              | 43                      | 4,900,000          | .....               | 12.49                        | 250                    |
| 1913.....                         | 169                         | 546,524            | 114,600              | 39                      | 4,476,000          | .....               | 12.21                        | 244                    |

## SUGAR—Continued.

TABLE 275.—*Sugar: International trade, calendar years 1909-1920.*

The following kinds and grades have been included under the head of sugar: Brown, white candied, caramel, chancaca (Peru), crystal cube, maple, muscovado, panela. The following have been excluded: "Candy" (meaning confectionery), confectionery, glucose, grape sugar, jaggery, molasses, and sirups. See "General note," Table 125.

| Country.                                    | Average, 1909-1913       |                          | 1918                     |                          | 1919                     |                          | 1920                     |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|   | Imports.                 | Exports.                 | Imports.                 | Exports.                 | Imports.                 | Exports.                 | Imports.                 | Exports.                 |
| <b>PRINCIPAL EXPORT-<br/>ING COUNTRIES.</b> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> |
| Austria-Hungary.....                        | 7,884                    | 1,697,659                |                          |                          |                          |                          | 132,595                  | 18                       |
| Barbados.....                               | 1,466                    | 51,637                   |                          | 74,384                   |                          | 113,819                  |                          | 116,043                  |
| Belgium.....                                | 15,784                   | 308,952                  |                          |                          | 110,294                  | 50,222                   | 127,356                  | 159,333                  |
| Brazil.....                                 | 1,234                    | 76,568                   | 74                       | 254,926                  | 231                      | 153,063                  | 13                       | 240,612                  |
| British Guiana.....                         | 12,224                   | 212,393                  |                          | 210,340                  |                          | 186,234                  |                          | 187,668                  |
| Cuba.....                                   | 1,312                    | 4,019,798                | 294                      | 7,293,915                | 85                       | 8,995,775                |                          |                          |
| Dominican Republic.....                     | 1,533                    | 184,708                  | 992                      | 264,624                  | 798                      | 357,835                  |                          |                          |
| Dutch East Indies.....                      | 7,124                    | 2,825,111                | 5,470                    | 3,395,304                | 6,195                    | 4,115,514                |                          |                          |
| Fiji.....                                   | 1,771                    | 157,633                  |                          |                          |                          | 114,140                  |                          | 163,520                  |
| France.....                                 | 372,395                  | 413,795                  | 417,493                  | 136,914                  | 1,254,263                | 173,835                  | 1,332,178                | 156,247                  |
| Germany.....                                | 6,973                    | 1,746,322                |                          |                          |                          |                          | 203,166                  | 14,162                   |
| Guadeloupe.....                             | 390                      | 75,270                   |                          | 58,661                   |                          |                          |                          |                          |
| Martinique.....                             | 461                      | 85,110                   |                          | 45,661                   |                          |                          |                          |                          |
| Mauritius.....                              | 14                       | 452,510                  | 5                        | 403,931                  | 2                        | 687,610                  | 1                        | 402,262                  |
| Netherlands.....                            | 165,443                  | 400,980                  | 25                       | 51,027                   | 105,134                  | 86,240                   | 92,826                   | 167,827                  |
| Peru.....                                   | 1,451                    | 293,472                  | 164                      | 436,465                  | 195                      | 599,920                  |                          |                          |
| Philippine Islands.....                     | 7,900                    | 358,865                  | 445                      | 602,425                  | 3,261                    | 299,959                  | 5,379                    | 397,579                  |
| Reunion.....                                | 34                       | 83,318                   |                          | 83,246                   |                          |                          |                          |                          |
| Russia.....                                 | 7,487                    | 587,028                  |                          |                          |                          |                          |                          |                          |
| Trinidad and Tobago.....                    | 11,045                   | 87,510                   | 299                      | 78,684                   | 53                       | 84,685                   |                          | 111,948                  |
| <b>PRINCIPAL IMPORT-<br/>ING COUNTRIES.</b> |                          |                          |                          |                          |                          |                          |                          |                          |
| Argentina.....                              | 103,830                  | 144                      | 73,489                   | 21                       | 181,318                  | 3,203                    |                          |                          |
| Australia.....                              | 152,465                  | 535                      | 117,770                  | 1,956                    | 252,683                  | 340                      |                          |                          |
| British India.....                          | 1,431,980                | 53,222                   | 1,190,562                | 71,221                   | 941,930                  | 52,864                   | 704,255                  | 88,301                   |
| British South Africa.....                   | 61,282                   | 1,513                    | 45,091                   | 5,533                    | 9,561                    | 38,228                   | 4,339                    | 32,869                   |
| Canada.....                                 | 595,785                  | 1,639                    | 657,926                  | 6,872                    | 1,059,898                | 246,980                  | 730,877                  | 76,980                   |
| Chile.....                                  | 169,931                  | 181                      | 195,774                  | 7,249                    | 198,022                  | 1,373                    | 163,066                  | 66                       |
| China.....                                  | 687,243                  | 29,567                   | 1,165,173                | 26,905                   | 691,717                  | 32,333                   | 514,305                  | 46,621                   |
| Denmark.....                                | 43,627                   | 45,073                   | 103                      | 23,263                   | 4,142                    | 20,308                   | 1,038                    | 38,558                   |
| Egypt.....                                  | 86,041                   | 16,171                   | 40,704                   | 37,659                   | 27,574                   | 27,973                   | 82,407                   | 30,412                   |
| Finland.....                                | 100,183                  |                          | 7,548                    |                          | 62,468                   |                          | 55,203                   |                          |
| Italy.....                                  | 18,499                   | 603                      | 81,638                   | 235                      | 175,224                  | 54                       | 25,078                   | 59                       |
| Japan.....                                  | 353,585                  | 120,407                  | 496,720                  | 259,193                  | 606,457                  | 151,841                  | 396,509                  | 135,755                  |
| New Zealand.....                            | 125,924                  | 1,26,955                 | 112,974                  | 2,335                    | 131,340                  | 2,643                    | 138,267                  | 1,07                     |
| Norway.....                                 | 104,651                  |                          | 75,635                   |                          | 187,229                  |                          | 200,313                  |                          |
| Persia.....                                 | 218,703                  | 1,114                    | 124,875                  | 3,701                    | 82,557                   | 5,636                    |                          |                          |
| Portugal.....                               | 79,262                   |                          | 44,301                   | 31                       | 64,741                   | 24                       |                          |                          |
| Singapore.....                              | 163,220                  | 95,578                   | 415,363                  | 358,265                  |                          |                          | 91,848                   | 73,849                   |
| Switzerland.....                            | 236,403                  |                          | 160,649                  |                          | 231,322                  | 1                        | 279,056                  | 1                        |
| United Kingdom.....                         | 3,707,211                | 65,207                   | 2,016,755                | 1,804                    | 3,509,118                | 2,867                    | 3,035,175                | 5,212                    |
| United States.....                          | 4,245,034                | 79,368                   | 5,170,976                | 407,296                  | 7,023,620                | 1,475,408                | 8,078,760                | 924,192                  |
| Other countries.....                        | 954,557                  | 287,612                  | 373,963                  | 190,257                  | 406,141                  | 743,905                  | 424,136                  | 548,768                  |
| Total.....                                  | 14,250,121               | 14,944,141               | 12,993,315               | 14,794,263               | 17,327,573               | 18,835,381               | 16,863,116               | 4,154,99                 |

\* Four-year average.

\* One-year average.

\* Three-year average.

SUGAR—Continued.

TABLE 276.—Sugar production of undermentioned countries, campaigns of 1909-10 to 1919-20.

BET SUGAR (RAW).

| Country.              | Average<br>1909-10 to<br>1913-14. | 1915-16                | 1916-17                | 1917-18                | 1918-19                | 1919-20                | 1920-21                  |
|-----------------------|-----------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| <b>NORTH AMERICA.</b> |                                   |                        |                        |                        |                        |                        |                          |
| United States.....    | Short tons.<br>609,620            | Short tons.<br>874,220 | Short tons.<br>820,637 | Short tons.<br>765,207 | Short tons.<br>700,850 | Short tons.<br>726,451 | Short tons.<br>1,090,021 |
| Canada.....           | 11,457                            | 19,753                 | 8,512                  | 11,683                 | 25,016                 | 18,920                 | 35,523                   |
| Total.....            | 621,077                           | 893,973                | 829,149                | 776,895                | 725,866                | 745,371                | 1,125,544                |
| <b>EUROPE.</b>        |                                   |                        |                        |                        |                        |                        |                          |
| Austria.....          | 43,194                            |                        |                        |                        |                        | 5,657                  | 15,432                   |
| Belgium.....          | 276,075                           | 119,926                | 140,473                | 135,869                | 77,954                 | 151,515                | 257,559                  |
| Bulgaria.....         | 7,688                             | 12,777                 | 9,945                  | 11,543                 | 3,713                  | 13,074                 | 8,267                    |
| Czechoslovakia.....   | 1,017,237                         |                        |                        |                        | 687,553                | 559,325                | 770,386                  |
| Denmark.....          | 127,602                           | 143,475                | 123,584                | 140,653                | 117,536                | 176,368                | 131,922                  |
| France.....           | 759,426                           | 149,802                | 204,405                | 220,752                | 121,374                | 170,969                | 370,032                  |
| Germany.....          | 2,296,131                         | 1,678,402              | 1,721,250              | 1,726,453              | 1,483,807              | 808,304                | 1,211,944                |
| Hungary.....          | 467,742                           | 303,999                | 289,107                | 173,024                | 97,517                 | 12,477                 | 36,376                   |
| Italy.....            | 208,675                           | 165,781                | 159,690                | 102,100                | 119,524                | 165,001                | 149,913                  |
| Yugoslavia.....       | 20,948                            |                        |                        |                        |                        |                        |                          |
| Netherlands.....      | 246,341                           | 263,826                | 286,102                | 214,891                | 181,986                | 263,110                | 314,486                  |
| Poland.....           | 279,374                           |                        |                        |                        |                        | 198,414                | 188,493                  |
| Rumania.....          | 59,934                            |                        |                        |                        |                        | 1,213                  | 16,534                   |
| Russia.....           | 1,726,231                         | 1,823,602              | 1,456,800              | 1,133,804              | 317,793                | 55,537                 | 55,115                   |
| Spain.....            | 115,727                           | 117,334                | 139,280                | 154,317                | 169,223                | 91,089                 | 104,456                  |
| Sweden.....           | 153,581                           | 140,380                |                        |                        |                        |                        | 180,777                  |
| Switzerland.....      | 4,390                             | 2,616                  | 1,984                  |                        |                        |                        |                          |
| Total.....            | 7,819,296                         | 4,921,950              | 4,532,620              | 4,013,436              | 3,378,240              | 2,722,053              | 3,824,992                |
| <b>OCEANIA.</b>       |                                   |                        |                        |                        |                        |                        |                          |
| Australia.....        | 719                               | 627                    | 2,182                  | 1,904                  |                        |                        |                          |
| Grand total.....      | 8,441,092                         | 5,816,555              | 5,363,971              | 4,792,265              | 4,164,336              | 3,467,424              | 4,953,836                |

CANE SUGAR.

|                          |           |           |           |           |           |           |           |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>NORTH AMERICA.</b>    |           |           |           |           |           |           |           |
| United States:           |           |           |           |           |           |           |           |
| Louisiana.....           | 301,173   | 137,500   | 303,900   | 213,600   | 250,900   | 121,000   | 163,127   |
| Texas.....               | 9,664     | 1,120     | 7,000     | 2,240     | 3,500     | 1,125     | 6,987     |
| Hawaii.....              | 567,495   | 592,763   | 614,663   | 576,700   | 600,312   | 556,343   | 521,759   |
| Porto Rico.....          | 363,474   | 483,590   | 503,081   | 453,794   | 406,002   | 485,071   | 489,818   |
| Virgin Islands.....      | 9,312     | 15,000    | 6,720     | 6,048     | 10,080    | 13,888    |           |
| Central America:         |           |           |           |           |           |           |           |
| British Honduras.....    | 575       | 784       |           |           |           |           |           |
| Costa Rica.....          | 2,922     | 5,740     | 6,538     |           | 4,225     |           |           |
| Guatemala.....           | 8,284     | 33,069    | 33,069    | 33,069    | 25,142    | 14,816    |           |
| Honduras.....            |           | 2,980     |           |           |           |           |           |
| Nicaragua.....           | 5,000     | 10,000    | 15,000    | 12,000    | 12,000    | 16,000    |           |
| Salvador.....            | 13,618    | 18,818    |           | 20,355    | 30,515    | 15,304    |           |
| Mexico.....              | 163,000   | 71,650    | 55,115    | 35,580    | 78,400    | 103,040   | 110,230   |
| West Indies:             |           |           |           |           |           |           |           |
| British—                 |           |           |           |           |           |           |           |
| Antigua.....             | 12,919    | 12,218    | 20,769    | 19,181    | 14,679    | 18,667    | 11,396    |
| Barbados.....            | 27,788    | 32,411    | 77,691    | 58,195    | 84,304    | 77,983    | 62,957    |
| Jamaica.....             | 23,856    | 25,562    | 43,731    | 35,291    | 48,160    | 52,500    | 42,550    |
| Montserrat.....          | 222       | 467       | 329       | 329       | 65        | 151       | 151       |
| St. Christopher.....     | 13,232    | 10,244    | 19,040    | 16,854    |           |           |           |
| St. Lucia.....           | 5,436     | 5,184     | 5,011     | 3,516     | 4,100     | 4,928     | 5,682     |
| St. Vincent.....         | 349       | 253       | 599       | 632       | 638       | 1,272     | 560       |
| Trinidad and Tobago..... | 51,275    | 65,881    | 71,939    | 79,140    | 50,687    | 53,592    | 65,426    |
| Cuba.....                | 2,295,353 | 3,436,649 | 3,441,771 | 3,957,061 | 4,596,710 | 4,209,349 | 4,408,365 |
| Dominican Republic.....  | 106,539   | 140,443   | 149,943   | 172,800   | 186,682   | 225,920   | 229,278   |
| French—                  |           |           |           |           |           |           |           |
| Guadeloupe.....          | 40,917    | 39,256    | 35,690    | 30,864    | 29,326    |           |           |
| Martinique.....          | 42,567    | 37,968    | 28,017    | 22,831    | 11,230    |           |           |
| Total.....               | 4,055,391 | 5,229,530 | 5,464,616 | 5,786,110 | 6,477,657 | 5,970,949 | 6,124,296 |

## SUGAR—Continued.

TABLE 276.—*Sugar production of undermentioned countries, campaigns of 1909-10 to 1919-20—Continued.*

## CANE SUGAR—Continued.

| Country.                       | Average<br>1909-10 to<br>1913-14. | 1915-16                       | 1916-17                      | 1917-18                      | 1918-19                       | 1919-20                       | 1920-21                       |
|--------------------------------|-----------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>SOUTH AMERICA.</b>          |                                   |                               |                              |                              |                               |                               |                               |
| Argentina.....                 | <i>Short tons.</i><br>193,855     | <i>Short tons.</i><br>164,572 | <i>Short tons.</i><br>92,669 | <i>Short tons.</i><br>97,085 | <i>Short tons.</i><br>139,463 | <i>Short tons.</i><br>323,095 | <i>Short tons.</i><br>230,990 |
| Brazil.....                    | 38,274                            | 456,114                       | 413,362                      | 432,728                      | 440,479                       | 496,095                       | 579,939                       |
| Guyana.....                    |                                   |                               |                              |                              |                               |                               |                               |
| British.....                   | 106,194                           | 128,007                       | 121,163                      | 120,467                      | 90,350                        | 107,520                       | 106,400                       |
| Dutch.....                     | 12,571                            | 9,694                         | 15,829                       | 12,357                       | 8,960                         |                               |                               |
| Paraguay.....                  | 1,363                             | 2,355                         | 869                          | 803                          | 619                           | 2,745                         |                               |
| Peru.....                      | 210,608                           | 304,236                       | 279,077                      | 316,890                      | 336,000                       | 302,000                       | 335,805                       |
| Total.....                     | 562,873                           | 1,094,278                     | 922,969                      | 1,040,335                    | 1,015,871                     | 1,326,395                     | 1,393,134                     |
| <b>EUROPE.</b>                 |                                   |                               |                              |                              |                               |                               |                               |
| Spain.....                     | 17,059                            | 4,700                         | 5,053                        | 6,297                        | 6,921                         | 7,452                         | 6,864                         |
| <b>ASIA.</b>                   |                                   |                               |                              |                              |                               |                               |                               |
| British India.....             | 2,614,326                         | 2,950,080                     | 3,057,600                    | 3,708,320                    | 2,617,440                     | 3,361,056                     | 2,790,800                     |
| Formosa.....                   | 192,299                           | 361,513                       | 504,597                      | 515,089                      | 379,323                       | 321,614                       | 355,805                       |
| Japan.....                     | 75,718                            | 78,391                        | 99,614                       | 141,438                      | 102,428                       |                               |                               |
| Java.....                      | 1,513,736                         | 1,796,558                     | 2,008,521                    | 1,960,118                    | 1,478,103                     | 1,472,796                     | 1,573,657                     |
| Philippine Islands.....        | 170,447                           | 412,274                       | 425,266                      | 474,745                      | 453,346                       | 466,912                       | 608,499                       |
| Total.....                     | 4,566,526                         | 5,598,821                     | 6,096,198                    | 6,802,710                    | 5,030,640                     | 5,622,408                     | 5,333,761                     |
| <b>AFRICA.</b>                 |                                   |                               |                              |                              |                               |                               |                               |
| Egypt.....                     | 67,128                            | 109,068                       | 112,080                      | 37,620                       | 83,663                        | 99,207                        | 83,184                        |
| Mauritius.....                 | 233,671                           | 236,463                       | 230,419                      | 245,581                      | 278,187                       | 267,308                       | 285,385                       |
| Natal.....                     | 88,165                            | 112,000                       | 128,240                      | 119,000                      | 164,050                       | 168,000                       | 176,368                       |
| Portuguese East Africa.....    | 27,800                            | 41,128                        | 40,406                       | 47,926                       | 22,724                        | 38,880                        | 44,062                        |
| Reunion.....                   | 41,658                            | 43,320                        | 49,604                       | 46,462                       | 55,115                        | 35,644                        | 44,092                        |
| Total.....                     | 458,422                           | 541,999                       | 560,749                      | 549,589                      | 603,769                       | 608,739                       | 638,121                       |
| <b>OCEANIA.</b>                |                                   |                               |                              |                              |                               |                               |                               |
| Australia.....                 | 216,331                           | 179,788                       | 216,201                      | 354,941                      | 219,358                       | 181,774                       | 183,926                       |
| Fiji.....                      | 84,629                            | 105,577                       | 134,902                      | 109,014                      | 72,070                        | 81,743                        | 66,138                        |
| Total.....                     | 300,960                           | 285,365                       | 351,103                      | 463,955                      | 291,428                       | 263,517                       | 250,064                       |
| Total cane sugar.....          | 9,971,231                         | 12,754,793                    | 13,400,777                   | 14,648,946                   | 13,426,286                    | 13,799,460                    | 13,656,260                    |
| Total beet and cane sugar..... | 13,412,328                        | 15,571,348                    | 18,764,749                   | 19,441,181                   | 17,590,662                    | 17,268,884                    | 18,610,096                    |

TABLE 277.—*Sugar: Total production of countries as reported 1895-1896 to 1920-1921.*

| Year.          | Production.                     |                                 |                                 | Year.        | Production.                     |                                 |                                  |
|----------------|---------------------------------|---------------------------------|---------------------------------|--------------|---------------------------------|---------------------------------|----------------------------------|
|                | Cane. <sup>1</sup>              | Beet.                           | Total.                          |              | Cane. <sup>1</sup>              | Beet.                           | Total.                           |
| 1895-96.....   | <i>Short tons.</i><br>3,259,000 | <i>Short tons.</i><br>4,832,000 | <i>Short tons.</i><br>8,091,000 | 1908-9.....  | <i>Short tons.</i><br>8,654,000 | <i>Short tons.</i><br>7,350,000 | <i>Short tons.</i><br>16,004,000 |
| 1896-97.....   | 3,171,000                       | 5,549,000                       | 8,720,000                       | 1909-10..... | 9,423,000                       | 6,991,000                       | 16,414,000                       |
| 1897-98.....   | 3,206,000                       | 5,457,000                       | 8,663,000                       | 1910-11..... | 9,540,000                       | 9,042,000                       | 18,582,000                       |
| 1898-99.....   | 3,355,000                       | 5,616,000                       | 8,971,000                       | 1911-12..... | 10,275,000                      | 7,072,000                       | 17,347,000                       |
| 1899-1900..... | 3,389,000                       | 6,262,000                       | 9,651,000                       | 1912-13..... | 10,908,000                      | 9,309,769                       | 20,518,000                       |
| 1900-1901..... | 4,084,000                       | 6,795,000                       | 10,879,000                      | 1913-14..... | 11,270,200                      | 9,433,783                       | 20,703,983                       |
| 1901-2.....    | 6,818,000                       | 7,743,000                       | 14,561,000                      | 1914-15..... | 11,292,997                      | 8,330,628                       | 19,523,535                       |
| 1902-3.....    | 6,732,000                       | 6,454,000                       | 13,296,000                      | 1915-16..... | 12,754,783                      | 5,816,555                       | 18,571,338                       |
| 1903-4.....    | 6,309,000                       | 6,835,000                       | 13,144,000                      | 1916-17..... | 13,400,777                      | 5,363,971                       | 18,764,749                       |
| 1904-5.....    | 7,662,000                       | 5,525,999                       | 13,187,999                      | 1917-18..... | 14,648,946                      | 4,792,235                       | 19,441,181                       |
| 1905-6.....    | 7,551,000                       | 8,090,000                       | 15,641,000                      | 1918-19..... | 13,426,286                      | 4,161,336                       | 17,590,622                       |
| 1906-7.....    | 8,365,000                       | 7,587,000                       | 15,952,000                      | 1919-20..... | 13,799,470                      | 3,467,424                       | 17,266,894                       |
| 1907-8.....    | 7,926,000                       | 7,390,000                       | 15,316,000                      | 1920-21..... | 13,656,260                      | 4,953,536                       | 18,610,096                       |

<sup>1</sup> Prior to 1901-2 these figures include exports instead of production for British India.

SUGAR BEETS.

TABLE 278.—*Sugar beets: Area and production in undermentioned countries, 1909-1920.*

| Country.                       | Area.                  |                        |                        |                        | Production.                      |                                  |                                  |                                  |
|--------------------------------|------------------------|------------------------|------------------------|------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|                                | Average,<br>1909-1913  | 1918                   | 1919                   | 1920                   | Average,<br>1909-1913            | 1918                             | 1919                             | 1920                             |
| <b>NORTH AMERICA.</b>          |                        |                        |                        |                        |                                  |                                  |                                  |                                  |
| United States.....             | 1,000<br>568<br>acres. | 1,000<br>594<br>acres. | 1,000<br>692<br>acres. | 1,000<br>873<br>acres. | 1,000<br>5,555<br>short<br>tons. | 1,000<br>5,949<br>short<br>tons. | 1,000<br>5,888<br>short<br>tons. | 1,000<br>7,959<br>short<br>tons. |
| Canada.....                    | 18                     | 18                     | 25                     | 26                     | 174                              | 180                              | 240                              | 412                              |
| Total.....                     | 586                    | 612                    | 7,717                  | 909                    | 5,729                            | 6,129                            | 6,128                            | 8,411                            |
| <b>EUROPE.</b>                 |                        |                        |                        |                        |                                  |                                  |                                  |                                  |
| Austria.....                   | 642                    | 21                     | 13                     | 18                     | 8,202                            | 188                              | 88                               | 2                                |
| Hungary proper.....            | 432                    |                        |                        | 78                     | 5,275                            | 97                               | 13                               | 7                                |
| Croatia-Slavonia.....          | 10                     |                        |                        |                        | 73                               |                                  |                                  |                                  |
| Bosnia-Herzegovina.....        | 3                      |                        |                        |                        | 12                               |                                  |                                  |                                  |
| Belgium.....                   | 142                    |                        | 112                    | 131                    | 1,720                            |                                  | 706                              | 16                               |
| Bulgaria.....                  | 8                      | 4                      | 21                     | 23                     | 81                               | 45                               | 139                              | 1                                |
| Czechoslovakia.....            |                        | 455                    | 433                    | 517                    |                                  | 5,034                            | 4,008                            | 53                               |
| Denmark.....                   | 80                     | 89                     | 102                    | 95                     | 1,025                            | 1,041                            | 1,132                            | 9                                |
| England.....                   | 4                      |                        |                        |                        |                                  |                                  |                                  |                                  |
| Finland.....                   |                        |                        |                        | 3                      |                                  |                                  | 6                                |                                  |
| France.....                    | 623                    | 145                    | 154                    | 222                    | 7,254                            | 1,051                            | 1,825                            | 2,295                            |
| Alsace-Lorraine.....           |                        | 1                      |                        | 3                      |                                  | 11                               |                                  |                                  |
| Germany.....                   | 1,335                  | 906                    | 965                    | 902                    | 18,509                           | 9,600                            | 5,287                            | 7,341                            |
| Italy.....                     | 143                    | 106                    | 166                    | 126                    | 2,455                            | 1,250                            | 1,881                            | 1,823                            |
| Yugoslavia.....                |                        |                        |                        | 43                     |                                  |                                  | 66                               | 88                               |
| Netherlands.....               | 154                    | 92                     | 122                    | 157                    | 2,117                            | 1,372                            | 1,647                            | 2,320                            |
| Rumania.....                   | 34                     | 18                     | 8                      | 8                      | 316                              | 54                               |                                  |                                  |
| Russia proper.....             | 1,578                  |                        |                        |                        | 12,119                           |                                  |                                  |                                  |
| Poland.....                    | 170                    |                        | 60                     | 175                    | 1,399                            |                                  |                                  |                                  |
| Northern Caucasus (Kuban)..... | 8                      |                        |                        | 84                     |                                  |                                  |                                  |                                  |
| Spain.....                     | 126                    | 163                    | 134                    | 175                    | 2,130                            | 742                              | 1,160                            | 14                               |
| Sweden.....                    | 69                     | 75                     | 87                     | 104                    | 940                              | 902                              | 1,003                            | 1,111                            |
| Switzerland.....               | 2                      | 1                      | 85                     | 1                      | 21                               | 14                               | 11                               |                                  |
| Total.....                     | 5,563                  | 2,115                  | 2,106                  | 2,572                  | 63,742                           | 21,401                           | 18,562                           | 14,951                           |
| Grand total.....               | 6,149                  | 2,727                  | 2,823                  | 3,481                  | 69,471                           | 27,580                           | 24,710                           | 23,362                           |

MAPLE SUGAR AND SIRUP.

TABLE 279.—*Maple sugar and sirup production, 1839-1921.*

[Figures for 1921 subject to revision.]

CENSUS.

| State and year. | Trees tapped. | Sugar made. | Sirup made.      | Total product<br>in terms of<br>sugar. <sup>1</sup> | Average per tree. |           |
|-----------------|---------------|-------------|------------------|---|-------------------|-----------|
|                 |               |             |                  |   | As sugar.         | As sirup. |
| United States:  | Number.       | Pounds.     | Gallons.         | Pounds.   | Pounds.           | Gallons.  |
| 1839.....       |               | 34,516,266  | ( <sup>2</sup> ) |   |                   |           |
| 1849.....       |               | 34,223,436  | ( <sup>2</sup> ) |   |                   |           |
| 1859.....       |               | 40,120,205  | 1,597,539        | 52,900,917  |                   |           |
| 1869.....       |               | 28,443,645  | 921,057          | 35,812,101  |                   |           |
| 1879.....       |               | 36,576,061  | 1,796,048        | 50,944,445  |                   |           |
| 1889.....       |               | 32,952,927  | 2,258,376        | 51,019,935  |                   |           |
| 1899.....       |               | 11,925,770  | 2,056,611        | 28,381,658  |                   |           |
| 1909.....       | 18,899,523    | 14,024,298  | 4,106,418        | 46,911,550  | 2.48              | 0.31      |
| 1919.....       | 17,457,144    | 9,691,854   | 3,507,745        | 37,753,814  | 2.16              | .27       |

<sup>1</sup> One gallon of sirup taken as equivalent to 8 pounds of sugar.

<sup>2</sup> Reported as "sugar" (not "maple sugar"), but for States which are too far north to make cane sugar. No beet sugar was made at this time.

<sup>3</sup> Not reported.

## MAPLE SUGAR AND SIRUP—Continued.

TABLE 279.—Maple sugar and sirup production, 1839-1921—Continued.

BUREAU OF MARKETS AND CROP ESTIMATES.

| State and year.                     | Trees tapped. | Sugar made. | Sirup made. | Total product in terms of sugar. <sup>1</sup> | Average per tree. |           |
|-------------------------------------|---------------|-------------|-------------|---|-------------------|-----------|
|                                     |               |             |             |   | As sugar.         | As sirup. |
|                                     | Number.       | Pounds.     | Gallons.    | Pounds.                                       | Pounds.           | Gallons.  |
| <b>Total 13 States:<sup>2</sup></b> |               |             |             |   |                   |           |
| 1917.....                           | 17,466,400    | 10,838,650  | 4,286,100   | 45,127,450                                    | 2.58              | 0.32      |
| 1918.....                           | 19,312,200    | 13,270,865  | 4,905,264   | 52,512,977                                    | 2.72              | .34       |
| 1919.....                           | 17,531,493    | 10,466,306  | 3,528,160   | 38,691,600                                    | 2.21              | .28       |
| 1920.....                           | 17,635,013    | 7,070,281   | 3,369,652   | 33,768,300                                    | 1.92              | .24       |
| 1921.....                           | 15,234,100    | 4,891,732   | 2,400,707   | 24,097,400                                    | 1.58              | .20       |
| <b>Maine:</b>                       |               |             |             |   |                   |           |
| 1919.....                           | 304,000       | 63,232      | 41,496      | 395,200                                       | 1.30              | .16       |
| 1920.....                           | 320,000       | 35,840      | 59,520      | 512,000                                       | 1.60              | .20       |
| 1921.....                           | 284,800       | 11,982      | 48,306      | 396,400                                       | 1.40              | .17       |
| <b>New Hampshire:</b>               |               |             |             |   |                   |           |
| 1919.....                           | 800,000       | 409,600     | 108,800     | 1,280,000                                     | 1.60              | .20       |
| 1920.....                           | 900,000       | 324,000     | 162,000     | 1,620,000                                     | 1.80              | .22       |
| 1921.....                           | 800,000       | 456,000     | 133,000     | 1,520,000                                     | 1.90              | .24       |
| <b>Vermont:</b>                     |               |             |             |   |                   |           |
| 1919.....                           | 5,955,513     | 6,105,780   | 650,152     | 11,307,000                                    | 1.90              | .24       |
| 1920.....                           | 5,955,513     | 4,068,000   | 904,000     | 11,300,000                                    | 1.90              | .24       |
| 1921.....                           | 5,100,000     | 2,937,000   | 745,375     | 8,900,000                                     | 1.75              | .22       |
| <b>Massachusetts:</b>               |               |             |             |   |                   |           |
| 1919.....                           | 252,751       | 150,360     | 48,330      | 537,000                                       | 2.12              | .27       |
| 1920.....                           | 309,500       | 158,490     | 53,564      | 537,000                                       | 1.90              | .24       |
| 1921.....                           | 269,300       | 112,640     | 49,920      | 512,000                                       | 1.90              | .24       |
| <b>Connecticut:</b>                 |               |             |             |   |                   |           |
| 1919.....                           | 9,000         | 6,720       | 2,660       | 28,000  | 3.11              | .39       |
| 1920.....                           | 12,000        | 3,600       | 4,050       | 36,000  | 3.00              | .38       |
| 1921.....                           | 8,000         | 6,480       | 2,190       | 24,000  | 3.00              | .38       |
| <b>New York:</b>                    |               |             |             |   |                   |           |
| 1919.....                           | 4,827,000     | 2,516,800   | 1,115,400   | 11,440,000                                    | 2.37              | .30       |
| 1920.....                           | 4,875,000     | 1,755,000   | 999,375     | 9,750,000                                     | 2.00              | .25       |
| 1921.....                           | 4,193,000     | 380,500     | 623,687     | 5,870,000                                     | 1.40              | .17       |
| <b>Pennsylvania:</b>                |               |             |             |   |                   |           |
| 1919.....                           | 1,020,000     | 561,204     | 263,899     | 2,672,400                                     | 2.62              | .33       |
| 1920.....                           | 1,061,000     | 414,851     | 253,181     | 2,440,300                                     | 2.30              | .29       |
| 1921.....                           | 800,000       | 172,800     | 98,400      | 960,000                                       | 1.20              | .15       |
| <b>Maryland:</b>                    |               |             |             |   |                   |           |
| 1919.....                           | 75,000        | 150,800     | 13,650      | 260,000                                       | 3.47              | .43       |
| 1920.....                           | 78,000        | 114,000     | 9,500       | 190,000                                       | 2.50              | .31       |
| 1921.....                           | 65,000        | 109,480     | 16,065      | 238,000                                       | 3.66              | .46       |
| <b>West Virginia:</b>               |               |             |             |   |                   |           |
| 1919.....                           | 100,000       | 160,000     | 30,000      | 400,000                                       | 4.00              | .50       |
| 1920.....                           | 60,000        | 85,600      | 16,060      | 214,000                                       | 3.57              | .45       |
| 1921.....                           | 40,000        | 48,000      | 9,000       | 120,000                                       | 3.00              | .38       |
| <b>Ohio:</b>                        |               |             |             |   |                   |           |
| 1919.....                           | 2,269,199     | 112,300     | 687,837     | 5,615,000                                     | 2.47              | .31       |
| 1920.....                           | 2,156,000     | 38,620      | 477,922     | 3,862,000                                     | 1.79              | .23       |
| 1921.....                           | 1,832,000     | 45,660      | 279,667     | 2,283,000                                     | 1.25              | .16       |
| <b>Indiana:</b>                     |               |             |             |   |                   |           |
| 1919.....                           | 560,000       | 138,880     | 199,640     | 1,736,000                                     | 3.10              | .39       |
| 1920.....                           | 560,000       | 7,840       | 97,020      | 784,000                                       | 1.40              | .18       |
| 1921.....                           | 532,000       | 36,960      | 149,330     | 1,232,000                                     | 2.32              | .29       |
| <b>Michigan:</b>                    |               |             |             |   |                   |           |
| 1919.....                           | 859,000       | 56,700      | 229,162     | 1,890,000                                     | 2.20              | .28       |
| 1920.....                           | 833,000       | 44,970      | 181,750     | 1,499,000                                     | 1.80              | .22       |
| 1921.....                           | 816,000       | 52,240      | 156,720     | 1,306,000                                     | 1.60              | .20       |
| <b>Wisconsin:</b>                   |               |             |             |   |                   |           |
| 1919.....                           | 500,000       | 33,930      | 137,134     | 1,131,000                                     | 2.26              | .28       |
| 1920.....                           | 520,000       | 19,480      | 121,750     | 974,000                                       | 1.87              | .23       |
| 1921.....                           | 494,000       | 22,020      | 88,997      | 734,000                                       | 1.48              | .19       |

<sup>1</sup> One gallon of sirup taken as equivalent to 8 pounds of sugar.<sup>2</sup> These 13 States produced in 1919, 98.4 per cent of the maple sugar crops of the United States and 98.5 per cent of the maple sirup.

## MAPLE SUGAR AND SIRUP—Continued.

TABLE 280.—*Maple sugar and sirup: Farm price, 15th of month, 1915-1920.*

| Date.        | Sugar (cents per pound). |      |      |      |      |      |      | Sirup (dollars per gallon). |      |      |      |      |      |      |
|--------------|--------------------------|------|------|------|------|------|------|-----------------------------|------|------|------|------|------|------|
|              | 1915                     | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1915                        | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 |
| Feb. 15..... | 11.6                     | 12.6 | 14.7 | 18.8 | 22.0 | 29.3 | 24.9 | 1.06                        | 1.08 | 1.22 | 1.58 | 1.86 | 2.35 | 2.27 |
| Mar. 15..... | 12.5                     | 13.4 | 14.7 | 20.5 | 25.3 | 31.6 | 25.7 | 1.10                        | 1.11 | 1.30 | 1.78 | 1.99 | 2.58 | 2.17 |
| Apr. 15..... | 12.9                     | 13.9 | 16.3 | 22.5 | 26.9 | 37.0 | 25.7 | 1.10                        | 1.17 | 1.33 | 1.80 | 2.03 | 2.92 | 2.21 |
| May 15.....  | 12.3                     | 13.6 | 16.2 | 22.6 | 26.3 | 36.0 | 21.5 | 1.07                        | 1.15 | 1.34 | 1.85 | 2.02 | 2.93 | 2.08 |
| June 15..... | 12.4                     | 13.7 | 15.9 | 22.0 | 26.2 | 35.1 | 20.7 | 1.12                        | 1.16 | 1.33 | 1.85 | 2.19 | 2.84 | 2.10 |

## SORGHUM FOR SIRUP.

TABLE 281.—*Sorghum for sirup: Acreage, production, and value, by States, 1920 and 1921, and totals, 1917-1921.*

| State and year.     | Thousands of acres. |      | Average yield, in gallons per acre. |      | Production (thousands of gallons). |        | Average farm price per gallon Dec. 1. |                     | Farm value (thousands of dollars). |        |
|---------------------|---------------------|------|-------------------------------------|------|------------------------------------|--------|---------------------------------------|---------------------|------------------------------------|--------|
|                     | 1920                | 1921 | 1920                                | 1921 | 1920                               | 1921   | 1920                                  | 1921                | 1920                               | 1921   |
| Virginia.....       | 14                  | 13   | 100                                 | 83   | 1,400                              | 1,079  | <i>Cents.</i><br>105                  | <i>Cents.</i><br>90 | 1,470                              | 971    |
| West Virginia.....  | 9                   | 8    | 100                                 | 95   | 900                                | 760    | 135                                   | 100                 | 1,215                              | 760    |
| North Carolina..... | 31                  | 32   | 97                                  | 94   | 3,007                              | 3,008  | 100                                   | 78                  | 3,007                              | 2,346  |
| South Carolina..... | 21                  | 21   | 100                                 | 90   | 2,100                              | 1,890  | 100                                   | 68                  | 2,100                              | 1,285  |
| Georgia.....        | 35                  | 37   | 94                                  | 94   | 3,290                              | 3,473  | 104                                   | 40                  | 3,422                              | 1,391  |
| Florida.....        | 1                   | 1    | 142                                 | 120  | 142                                | 120    | 100                                   | 50                  | 142                                | 60     |
| Ohio.....           | 6                   | 4    | 91                                  | 80   | 546                                | 320    | 132                                   | 100                 | 830                                | 320    |
| Indiana.....        | 13                  | 12   | 82                                  | 80   | 1,066                              | 960    | 140                                   | 100                 | 1,492                              | 960    |
| Illinois.....       | 11                  | 10   | 75                                  | 88   | 825                                | 880    | 145                                   | 99                  | 1,196                              | 871    |
| Wisconsin.....      | 6                   | 2    | 75                                  | 70   | 450                                | 140    | 180                                   | 140                 | 810                                | 196    |
| Minnesota.....      | 2                   | 2    | 100                                 | 110  | 200                                | 220    | 150                                   | 100                 | 300                                | 220    |
| Iowa.....           | 10                  | 8    | 90                                  | 84   | 900                                | 672    | 143                                   | 106                 | 1,287                              | 712    |
| Missouri.....       | 52                  | 28   | 83                                  | 86   | 4,316                              | 2,408  | 125                                   | 88                  | 5,395                              | 2,119  |
| Nebraska.....       | 2                   | 2    | 95                                  | 86   | 190                                | 172    | 135                                   | 108                 | 256                                | 177    |
| Kansas.....         | 5                   | 5    | 86                                  | 81   | 430                                | 405    | 125                                   | 92                  | 538                                | 373    |
| Kentucky.....       | 51                  | 48   | 95                                  | 85   | 4,845                              | 4,080  | 107                                   | 72                  | 5,184                              | 2,938  |
| Tennessee.....      | 47                  | 42   | 90                                  | 96   | 4,230                              | 4,032  | 101                                   | 59                  | 4,272                              | 2,379  |
| Alabama.....        | 71                  | 90   | 99                                  | 85   | 7,029                              | 7,650  | 90                                    | 42                  | 6,326                              | 3,213  |
| Mississippi.....    | 50                  | 53   | 90                                  | 88   | 4,500                              | 4,664  | 90                                    | 39                  | 4,050                              | 1,819  |
| Louisiana.....      | 2                   | 1    | 110                                 | 90   | 220                                | 90     | 100                                   | 52                  | 220                                | 47     |
| Texas.....          | 36                  | 35   | 94                                  | 87   | 3,384                              | 3,045  | 105                                   | 70                  | 3,553                              | 2,132  |
| Oklahoma.....       | 18                  | 18   | 94                                  | 81   | 1,692                              | 1,458  | 108                                   | 73                  | 1,827                              | 1,064  |
| Arkansas.....       | 42                  | 45   | 90                                  | 88   | 3,780                              | 3,960  | 105                                   | 57                  | 3,969                              | 2,257  |
| New Mexico.....     | 1                   | 1    | 63                                  | 63   | 63                                 | 63     | 130                                   | 95                  | 82                                 | 60     |
| Total.....          | 536                 | 518  | 92.4                                | 87.9 | 49,505                             | 45,554 | 106.9                                 | 62.9                | 52,943                             | 28,670 |
| 1919.....           | 457                 |      | 80.9                                |      | 39,413                             |        | 110.8                                 |                     | 43,683                             |        |
| 1918.....           | 375                 |      | 79.1                                |      | 29,643                             |        | 98.3                                  |                     | 28,532                             |        |
| 1917.....           | 415                 |      | 90.3                                |      | 37,472                             |        | 69.5                                  |                     | 26,055                             |        |



## TEA.

TABLE 282.—Tea: International trade, calendar years 1909–1920.

["Tea" includes tea leaves only and excludes dust, sweepings, and yerba mate. See "General note," Table 125.]

| Country.                              | Average, 1909–1913   |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| British India.....                    | 8,062                | 267,887              | 17,199               | 378,075              | 15,014               | 375,390              | 11,466               | 270,957              |
| Ceylon.....                           | 1                    | 189,016              | 3                    | 180,818              | 2                    | 208,561              | 1                    | 184,770              |
| China.....                            | 18,890               | 197,997              | 6,349                | 53,479               | 10,756               | 91,149               | 6,009                | 40,537               |
| Dutch East Indies.....                | 6,742                | 46,675               | 7,528                | 65,931               | 4,974                | 117,007              |                      |                      |
| Formosa.....                          | 68                   | 23,640               | 68                   | 24,848               | 116                  | 23,009               |                      | 14,589               |
| Japan.....                            | 590                  | 35,828               | 281                  | 46,825               | 415                  | 28,519               | 540                  | 24,102               |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Argentina.....                        | 3,890                |                      | 4,037                |                      | 3,983                |                      |                      |                      |
| Australia.....                        | 35,442               | ( <sup>2</sup> )     | 45,615               |                      | 56,857               |                      |                      |                      |
| Austria-Hungary.....                  | 3,424                | 3                    |                      |                      |                      |                      | * 790                |                      |
| British South Africa.....             | 5,402                | 62                   | 10,510               | 49                   | 7,705                | 333                  | 7,111                | 47                   |
| Canada.....                           | 37,927               |                      | 29,904               |                      | 27,026               |                      | 36,740               |                      |
| Chile.....                            | 3,505                |                      | 3,538                |                      | 6,142                |                      | 4,690                |                      |
| France.....                           | 2,806                | 61                   | 3,176                | 34                   | 4,626                | 83                   | 4,017                | 100                  |
| French Indo-China.....                | 3,295                | 1,145                | 2,431                | 2,290                | 2,719                | 1,989                |                      |                      |
| Germany.....                          | 8,964                | 29                   |                      |                      |                      |                      | 3,850                | 25                   |
| Netherlands.....                      | 11,283               | 45                   | 1,412                | ( <sup>2</sup> )     | 63,710               | 17,089               | 23,407               | 63                   |
| New Zealand.....                      | 7,542                |                      | 9,692                |                      | 8,503                |                      | 12,848               |                      |
| Persia.....                           | 9,446                | 125                  | 12,473               |                      | 8,006                | 290                  |                      |                      |
| Russia.....                           | 157,794              | 868                  |                      |                      |                      |                      |                      |                      |
| Singapore.....                        | 6,089                | 2,575                | 5,846                | 3,201                |                      |                      | 5,545                | 3,131                |
| United Kingdom.....                   | 293,045              |                      | 310,637              |                      | 454,817              |                      | 389,915              |                      |
| United States.....                    | 98,997               |                      | 134,413              |                      | 80,963               |                      | 90,247               |                      |
| Other countries.....                  | 33,635               | 4,661                | 17,429               | 12                   | 19,315               | 645                  | 21,622               | 297                  |
| <b>Total.....</b>                     | <b>756,689</b>       | <b>770,604</b>       | <b>622,661</b>       | <b>755,613</b>       | <b>734,649</b>       | <b>864,059</b>       | <b>613,833</b>       | <b>533,893</b>       |

<sup>1</sup> Two-year average.

<sup>2</sup> Less than 500 pounds.

\* Austria, only.

COFFEE.

TABLE 283.—Coffee: International trade, calendar years 1909–1920.

The item of coffee comprises unhulled and hulled, ground or otherwise prepared, but imitation or "surrogate" coffee and chicory are excluded. See "General note," Table 125.]

| Country.                              | Average, 1909–1913 |                  | 1913             |                  | 1919             |                  | 1920             |                  |
|---------------------------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                       | Imports.           | Exports.         | Imports.         | Exports.         | Imports.         | Exports.         | Imports.         | Exports.         |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> |                    |                  |                  |                  |                  |                  |                  |                  |
| Brazil.....                           | 1,000<br>pounds.   | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. |
| British India.....                    | 1 605              | 1,673,282        | 1,324            | 983,253          | 1,872            | 1,714,765        | 5,655            | 1,524,478        |
| Colombia.....                         |                    | 27,780           |                  | 14,868           |                  | 36,792           |                  | 19,407           |
| Costa Rica.....                       |                    | 104,398          |                  | 151,935          |                  |                  |                  |                  |
| Dutch East Indies.....                | 4,227              | 27,515           | 1,747            | 25,265           | 3,713            | 30,784           |                  |                  |
| Guatemala.....                        |                    | 54,149           |                  | 16,215           |                  | 273,738          |                  |                  |
| Haiti.....                            |                    | 85,951           |                  |                  |                  |                  |                  |                  |
| Jamaica.....                          |                    | 61,943           |                  |                  |                  |                  |                  |                  |
| Mexico.....                           |                    | 8,263            |                  |                  |                  |                  |                  |                  |
| Nicaragua.....                        | 1 167              | 48,991           |                  | 25,560           |                  | 33,658           |                  |                  |
| Salvador.....                         | 2 139              | 19,083           |                  |                  |                  |                  |                  |                  |
| Venezuela.....                        | 3 1,593            | 62,830           | 33               | 88,155           | 97               | 179,790          |                  |                  |
|                                       |                    | 111,326          |                  |                  |                  |                  |                  |                  |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                    |                  |                  |                  |                  |                  |                  |                  |
| Argentina.....                        | 28,125             |                  | 48,572           |                  | 37,541           |                  |                  |                  |
| Austria-Hungary.....                  | 128,304            | 8                |                  |                  |                  | 6,140            |                  |                  |
| Belgium.....                          | 111,733            | 33,627           |                  |                  | 86,861           | 14,978           | 30,111           | 3,407            |
| British South Africa.....             | 26,708             | 39               | 47,887           | 149              | 18,349           | 53               | 29,704           | 55               |
| Cuba.....                             | 24,906             | 4                | 26,050           | (*)              | 23,273           | 2                |                  |                  |
| Denmark.....                          | 33,102             | 152              | 7,618            |                  | 62,583           | 140              | 44,822           | 402              |
| Egypt.....                            | 15,654             |                  | 15,693           |                  | 16,039           |                  | 22,855           |                  |
| Finland.....                          | 28,624             |                  | 1,606            |                  | 21,618           |                  | 14,952           |                  |
| France.....                           | 245,752            | 41               | 300,310          | 110              | 457,450          | 636              | 323,254          | 1,983            |
| Germany.....                          | 399,965            | 1,767            |                  |                  |                  |                  | 90,602           | 62               |
| Italy.....                            | 58,278             | 468              | 113,848          | 8                | 30,405           | 96               | 66,509           | 14               |
| Netherlands.....                      | 283,683            | 189,288          | 7,973            | 1                | 120,738          | 28,234           | 133,749          | 37,551           |
| Norway.....                           | 29,309             |                  | 18,028           |                  | 70,265           |                  | 24,747           |                  |
| Russia.....                           | 26,073             |                  |                  |                  |                  |                  |                  |                  |
| Singapore.....                        | 6,000              | 4,700            | 5,125            | 4,191            |                  |                  | 25,730           | 28,739           |
| Spain.....                            | 29,317             | 9                | 36,097           | 13               | 42,391           | 130              | 46,519           | 5                |
| Sweden.....                           | 74,486             | 24               | 24,719           |                  | 36,118           | 107              | 98,412           |                  |
| Switzerland.....                      | 25,029             | 62               | 22,534           | 2                | 22,534           | 100              | 22,777           | 75               |
| United Kingdom.....                   | 28,581             | 241              | 47,934           | 8                | 48,789           | 71               | 27,434           | 108              |
| United States.....                    | 907,899            | 644,251          | 1,052,202        | 644,727          | 1,373,564        | 634,352          | 1,297,439        | 636,757          |
| Other countries.....                  | 96,646             | 49,225           | 79,791           | 13,061           | 61,567           | 6,964            | 60,608           | 58               |
| Total.....                            | 2,614,854          | 2,608,347        | 1,859,091        | 1,367,521        | 2,635,772        | 2,355,420        | 2,383,020        | 1,653,101        |

\* Four-year average.

\* Three-year average.

\* One-year average.

\* Austria, only new boundaries.

\* Less than 500 pounds.

\* Chiefly from Porto Rico.

## OIL CAKE AND OIL-CAKE MEAL.

TABLE 284.—Oil cake and oil-cake meal: International trade, calendar years 1909-1920.

[The class called here "oil cake and oil-cake meal" includes the edible cake and meal remaining after making oil from such products as cotton seed, flaxseed, peanuts, corn, etc. See "General note," Table 125.]

| Country.                              | Average, 1909-1913.  |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| Argentina.....                        |                      | 42, 587              |                      | 19, 258              |                      | 114, 024             |                      |                      |
| Austria-Hungary.....                  | 53, 673              | 124, 873             |                      |                      |                      |                      |                      |                      |
| British India.....                    | 1, 262               | 268, 648             | 2, 003               | 191, 307             | 2, 192               | 305, 134             | 4, 331               | 258, 688             |
| Canada.....                           | 7, 752               | 51, 870              | 44, 249              | 2, 456               | 12, 312              | 41, 222              | 14, 060              | 19, 270              |
| China.....                            | 1 174                | 147, 463             |                      | 167, 277             |                      | 231, 651             |                      | 159, 754             |
| Egypt.....                            |                      | 161, 624             |                      | 11                   |                      | 145, 246             |                      | 181, 732             |
| France.....                           | 288, 938             | 476, 883             | 33, 821              | 5, 323               | 15, 604              | 19, 310              | 16, 057              | 97, 001              |
| Italy.....                            | 10, 550              | 55, 115              | 4, 393               | 11, 129              | 99                   | 34, 468              | 69                   | 78, 100              |
| Mexico.....                           |                      | 33, 764              |                      |                      |                      |                      |                      |                      |
| Russia.....                           |                      | 1, 458, 413          |                      |                      |                      |                      |                      |                      |
| United States.....                    |                      | 1, 704, 124          | 37, 780              | 107, 063             | 112, 406             | 1, 087, 228          | 228, 833             | 589, 862             |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Belgium.....                          | 543, 648             | 155, 373             |                      |                      | 39, 209              | 76, 802              | 22, 582              | 70, 595              |
| Denmark.....                          | 1, 002, 329          | 15, 777              | 753                  |                      | 292, 103             | 1                    | 569, 272             | 23                   |
| Dutch East Indies.....                | 2, 509               | 13, 242              | 1, 646               | 45                   | 257                  | 119, 323             |                      |                      |
| Finland.....                          | 25, 333              | 2, 125               | 3, 015               |                      | 69, 631              |                      | 22, 779              |                      |
| Germany.....                          | 1, 686, 416          | 525, 108             |                      |                      |                      |                      | 111, 101             | 7, 690               |
| Japan.....                            | 189, 868             |                      | 185, 118             |                      | 295, 673             | 11, 948              | 307, 347             | 5, 633               |
| Netherlands.....                      | 707, 116             | 219, 819             | 213                  | ( <sup>2</sup> )     | 223, 859             | 13, 460              | 197, 312             | 203, 258             |
| Norway.....                           | 55, 112              | 2, 889               | 48, 432              |                      | 45, 341              |                      | 28, 003              | 2                    |
| Sweden.....                           | 346, 755             | 1, 535               | 14, 160              |                      | 151, 736             |                      | 141, 879             |                      |
| Switzerland.....                      | 69, 352              | 1, 413               | 24, 808              | 1                    | 91, 795              | 4                    | 53, 923              | 2, 382               |
| United Kingdom.....                   | 790, 865             | 161, 798             | 24, 232              | 157                  | 601, 604             | 11, 359              | 460, 766             | 48, 711              |
| Other countries.....                  | 30, 320              | 62, 610              | 863                  | 25, 897              | 816                  | 51, 973              | 208                  | 57, 935              |
| <b>Total.....</b>                     | <b>5, 812, 002</b>   | <b>5, 681, 538</b>   | <b>425, 546</b>      | <b>529, 924</b>      | <b>1, 954, 637</b>   | <b>2, 316, 152</b>   | <b>2, 178, 542</b>   | <b>1, 776, 404</b>   |

<sup>1</sup> Three-year average.<sup>2</sup> Less than 500 pounds.

## ROSIN.

TABLE 285.—Rosin: International trade, calendar years 1909-1920.

[For rosin, only the resinous substance known as "rosin" in the exports of the United States is taken. See "General note," Table 125.]

| Country.                       | Average, 1909-1913.  |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| PRINCIPAL EXPORTING COUNTRIES. |                      |                      |                      |                      |                      |                      |                      |                      |
|                                | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| France.....                    | 2,432                | 118,286              | 1,062                | 36,516               | 1,795                | 114,200              | 1,634                | 129,007              |
| Greece.....                    | 35                   | 10,423               | 306                  | 2,268                |                      | 5,989                |                      | 10,303               |
| Spain.....                     | 1,827                | 20,073               | 198                  | 12,461               | 203                  | 28,748               | 617                  | 26,555               |
| United States.....             |                      | 655,520              |                      | 218,128              |                      | 338,696              |                      | 326,012              |
| PRINCIPAL IMPORTING COUNTRIES. |                      |                      |                      |                      |                      |                      |                      |                      |
| Argentina.....                 | 32,719               | 145                  | 31,106               | 11                   | 34,965               | 29                   |                      |                      |
| Australia.....                 | 13,724               | 1,255                | 11,453               | 29                   | 13,420               | 43                   |                      |                      |
| Austria-Hungary.....           | 75,705               | 2,205                |                      |                      |                      |                      | 2,183                |                      |
| Belgium.....                   | 47,163               | 32,830               |                      |                      | 32,120               | 9,129                | 60,824               | 46,822               |
| Brazil.....                    | 36,905               |                      | 25,470               |                      | 37,945               |                      | 36,456               |                      |
| British India.....             | 6,171                |                      | 2,497                |                      | 687                  |                      | 3,930                |                      |
| Canada.....                    | 25,806               |                      | 34,255               |                      | 23,142               |                      | 28,763               |                      |
| Chile.....                     | 7,410                |                      | 2,703                |                      | 2,531                |                      | 4,313                |                      |
| Cuba.....                      | 4,123                |                      | 6,831                |                      | 5,187                |                      |                      |                      |
| Denmark.....                   | 3,236                |                      | 764                  |                      | 6,602                | 24                   | 2,575                | 24                   |
| Dutch East Indies.....         | 15,039               |                      | 12,944               |                      | 12,969               |                      |                      |                      |
| Finland.....                   | 6,027                | 144                  | 1,110                | 23                   | 3,124                | 789                  | 3,682                | 67                   |
| Germany.....                   | 233,100              | 50,110               |                      |                      |                      |                      | 49,255               | 514                  |
| Italy.....                     | 34,171               | 33                   | 23,266               | 4                    | 33,012               | 42                   | 36,134               | 315                  |
| Japan.....                     | 10,073               |                      | 26,142               |                      | 20,038               |                      | 38,685               |                      |
| Netherlands.....               | 73,991               | 59,366               | 207                  | ( <sup>1</sup> )     | 8,303                | 259                  | 9,618                | 64                   |
| Norway.....                    | 6,732                |                      | 3,959                |                      | 3,857                | 126                  | 5,411                |                      |
| Rumania.....                   | 5,004                | 41                   |                      |                      | 2,976                | ( <sup>2</sup> )     |                      |                      |
| Russia.....                    | 68,429               |                      |                      |                      |                      |                      |                      |                      |
| Serbia.....                    | 1,162                |                      |                      |                      |                      |                      |                      |                      |
| Switzerland.....               | 4,983                | 8                    | 9,108                |                      | 3,197                |                      | 4,302                |                      |
| United Kingdom.....            | 166,075              |                      | 84,183               |                      | 196,131              |                      | 124,368              |                      |
| Other countries.....           | 18,699               | 82                   | 12,805               | 8,367                | 7,043                | 12,201               | 6,964                | 129                  |
| Total.....                     | 900,441              | 950,381              | 290,379              | 277,807              | 450,149              | 510,275              | 417,726              | 540,112              |

<sup>1</sup> Four-year average.<sup>2</sup> Austria only.<sup>3</sup> Less than 500 pounds.<sup>4</sup> One-year average.<sup>5</sup> Three-year average.

## TURPENTINE.

TABLE 286.—*Turpentine (spirits): International trade, calendar years 1909-1920.*

["Spirits of turpentine" includes only "spirits" or "oil" of turpentine and for Russia skipidar; excludes crude turpentine, pitch, and for Russia turpentine. See "General note," Table 125.]

| Country.                            | Average, 1909-1913. |                   | 1918              |                   | 1919              |                   | 1920              |                   |
|-------------------------------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                     | Imports.            | Exports.          | Imports.          | Exports.          | Imports.          | Exports.          | Imports.          | Exports.          |
| PRINCIPAL EXPORT-<br>ING COUNTRIES. | 1,000<br>gallons.   | 1,000<br>gallons. | 1,000<br>gallons. | 1,000<br>gallons. | 1,000<br>gallons. | 1,000<br>gallons. | 1,000<br>gallons. | 1,000<br>gallons. |
| France.....                         | 48                  | 2,594             | 8                 | 731               | 82                | 2,078             | 85                | 3,659             |
| Russia.....                         | 273                 | 2,322             |                   |                   |                   |                   |                   |                   |
| Spain.....                          |                     | 1,156             |                   | 713               |                   | 1,360             |                   | 944               |
| United States.....                  |                     | 17,868            |                   | 3,717             |                   | 10,672            |                   | 9,458             |
| PRINCIPAL IMPORT-<br>ING COUNTRIES. |                     |                   |                   |                   |                   |                   |                   |                   |
| Argentina.....                      | 554                 |                   | 255               |                   | 480               |                   |                   |                   |
| Australia.....                      | 564                 |                   | 600               |                   | 391               |                   |                   |                   |
| Austria-Hungary.....                | 2,581               | 53                |                   |                   |                   |                   |                   |                   |
| Belgium.....                        | 1,932               | 1,144             |                   |                   | 1,086             | 315               | 1,528             | 1,804             |
| Canada.....                         | 1,175               |                   | 1,209             |                   | 1,139             |                   | 962               |                   |
| Chile.....                          | 193                 |                   | ( <sup>1</sup> )  |                   | 45                |                   | 287               |                   |
| Germany.....                        | 9,368               | 460               |                   |                   |                   |                   | 1,252             | 18                |
| Italy.....                          | 940                 | 3                 | 673               | 1                 | 1,198             | 2                 | 749               | 3                 |
| Netherlands.....                    | 3,998               | 2,750             | 21                | ( <sup>1</sup> )  | 971               | 50                | 947               | 12                |
| New Zealand.....                    | 178                 |                   | 95                |                   | 67                |                   | 93                |                   |
| Sweden.....                         | 134                 |                   | ( <sup>1</sup> )  | 10                | 115               | 102               | 112               | 244               |
| Switzerland.....                    | 466                 | 9                 | 439               |                   | 473               | ( <sup>1</sup> )  | 550               |                   |
| United Kingdom.....                 | 7,782               |                   | 960               |                   | 6,642             |                   | 6,752             | 236               |
| Other countries.....                | 1,009               | 522               | 908               | 84                | 1,233             | 695               | 1,080             |                   |
| Total.....                          | 31,200              | 28,943            | 5,163             | 4,493             | 13,922            | 15,274            | 14,375            | 16,438            |

<sup>1</sup> Less than 500 gallons.

INDIA RUBBER.

TABLE 287.—India rubber: International trade, calendar years 1909–1920.

[Figures for india rubber include "india rubber," so called, and caoutchouc, caucho, jebe (Peru), hule (Mexico), borracha, massaranduba, manabeta, manicoba, sorva, and seringa (Brazil), gomelastiek (Dutch East Indies), caura, ser nambi (Venezuela). See "General note," Table 125.]

| Country.                       | Average, 1909–1913. |               | 1918          |               | 1919          |               | 1920          |                  |
|--------------------------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
|                                | Imports.            | Exports.      | Imports.      | Exports.      | Imports.      | Exports.      | Imports.      | Exports.         |
| PRINCIPAL EXPORTING COUNTRIES. | 1,000 pounds.       | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds.    |
| Angola.....                    |                     | 5,620         |               |               |               |               |               |                  |
| Belgian Kongo.....             |                     | 7,755         |               |               |               |               |               |                  |
| Bolivia.....                   |                     | 8,395         |               | 9,452         |               |               |               |                  |
| Brazil.....                    |                     | 84,938        |               | 49,960        |               | 73,306        |               | 52,000           |
| Ceylon.....                    | <sup>1</sup> 1,299  | 10,953        | 5,507         | 46,290        | 4,655         | 100,822       | 4,465         | 88,553           |
| Dutch East Indies.....         | <sup>2</sup> 1      | 7,679         |               | 97,312        |               | 198,929       |               |                  |
| Ecuador.....                   |                     | 1,040         |               |               |               | 386           |               |                  |
| French Guinea.....             | 241                 | 3,937         |               | 1,563         |               | 1,504         |               |                  |
| French Kongo.....              | ( <sup>3</sup> )    | 3,797         |               |               |               |               |               |                  |
| Gold Coast.....                |                     | 2,393         |               | 1,391         |               | 722           |               |                  |
| Ivory Coast.....               | <sup>2</sup> 10     | 2,740         |               | 549           |               | 168           |               |                  |
| Kamerun.....                   |                     | 6,409         |               |               |               |               |               |                  |
| Mexico.....                    |                     | 14,282        |               |               |               |               |               |                  |
| Peru.....                      |                     | 5,030         |               | 3,828         |               | 7,126         |               |                  |
| Senegal.....                   | <sup>4</sup> 4      | 1,087         |               | 721           |               | 121           |               |                  |
| Singapore.....                 | 2,367               | 5,843         | 28            | 18            |               |               | 2             | 37               |
| Nigeria.....                   |                     | 3,054         |               | 353           |               | 892           |               |                  |
| Negri Sembilan.....            |                     | 3,995         |               | 33,945        |               | 51,175        | 20            | 47,289           |
| Perak.....                     |                     | 7,313         |               | 67,691        |               | 93,140        | 13            | 85,239           |
| Selangor.....                  |                     | 13,736        |               | 70,609        |               | 88,637        | 22            | 89,242           |
| Venezuela.....                 |                     | 772           | 24            | 81            | 81            | 519           | 132           | 388              |
| PRINCIPAL IMPORTING COUNTRIES. |                     |               |               |               |               |               |               |                  |
| Austria-Hungary.....           | 6,696               | 1,619         |               |               |               |               | 3,351         |                  |
| Belgium.....                   | 25,891              | 26,749        |               |               | 12,389        | 3,441         | 18,161        | 5,519            |
| Canada.....                    | 3,945               |               | 18,216        |               | 19,645        |               | 26,632        | ( <sup>3</sup> ) |
| France.....                    | 32,704              | 21,615        | 36,811        | 4,974         | 67,676        | 21,849        | 60,042        | 23,588           |
| Germany.....                   | 42,004              | 9,994         |               |               |               |               | 26,918        | 264              |
| Italy.....                     | 5,381               | 225           | 16,635        | 642           | 23,211        | 1,050         | 15,000        | 1,284            |
| Netherlands.....               | 10,822              | 7,172         | 3             | 11            | 14,001        | 7,793         | 27,296        | 14,954           |
| Russia.....                    | 19,131              |               |               |               |               |               |               |                  |
| United Kingdom.....            | 43,141              |               | 67,298        |               | 95,584        |               | 127,332       |                  |
| United States.....             | 100,180             |               | 325,959       |               | 535,940       |               | 569,545       |                  |
| Other countries.....           | 8,002               | 27,092        | 22,043        | 11,492        | 42,178        | 16,069        | 11,803        | 15,511           |
| Total.....                     | 302,319             | 289,064       | 462,496       | 401,094       | 815,369       | 617,025       | 933,933       | 423,858          |

<sup>1</sup> Three-year average.

<sup>2</sup> One year.

<sup>3</sup> Less than 500 pounds.

<sup>4</sup> Two-year average.

## SILK.

TABLE 288.—*Production of raw silk in undermentioned countries, 1909-1920.*

[Estimates of the Silk Merchants' Union, Lyon, France.]

| Country.                                | Average,<br>1909-1913. | 1916              | 1917              | 1918              | 1919              | 1920              |
|---|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Western Europe:</b>                  | <i>Pounds.</i>         | <i>Pounds.</i>    | <i>Pounds.</i>    | <i>Pounds.</i>    | <i>Pounds.</i>    | <i>Pounds.</i>    |
| Italy.....                              | 8,524,000              | 7,963,000         | 6,217,000         | 5,942,000         | 4,079,000         | 7,330,000         |
| France.....                             | 992,000                | 485,000           | 452,000           | 529,000           | 408,000           | 551,000           |
| Spain.....                              | 182,000                | 198,000           | 154,000           | 165,000           | 154,000           | 144,000           |
| Austria.....                            | 728,000                | 187,000           | 188,000           | 188,000           | 165,000           | .....             |
| Hungary.....                            |                        | 143,000           | 143,000           | 143,000           | 110,000           | .....             |
| Total.....                              | 10,424,000             | 8,976,000         | 7,154,000         | 6,967,000         | 4,916,000         | 8,025,000         |
| <b>Levant and Central Asia.....</b>     | <b>6,186,000</b>       | <b>2,293,000</b>  | <b>2,293,000</b>  | <b>2,293,000</b>  | <b>1,764,000</b>  | <b>1,654,000</b>  |
| <b>Far East:</b>                        |                        |                   |                   |                   |                   |                   |
| China—                                  |                        |                   |                   |                   |                   |                   |
| Exports from Shanghai.....              | 12,576,000             | 10,340,000        | 10,097,000        | 10,251,000        | 8,598,000         | 6,518,500         |
| Exports from Canton.....                | 5,146,000              | 5,346,000         | 5,170,000         | 4,134,000         | 5,071,000         | 4,210,000         |
| Japan—                                  |                        |                   |                   |                   |                   |                   |
| Exports from Yokohama.....              | 21,898,000             | 29,431,000        | 34,050,000        | 31,416,000        | 32,188,000        | 24,300,000        |
| British India—                          |                        |                   |                   |                   |                   |                   |
| Exports from Bengal and Cashmere.....   | 428,000                | 254,000           | 232,000           | 242,000           | 220,000           | 110,000           |
| Indo-China—                             |                        |                   |                   |                   |                   |                   |
| Exports from Saigon, Haiphong, etc..... | 131,000                | 7,000             | 11,000            | 11,000            | 11,000            | .....             |
| Total.....                              | 40,079,000             | 45,378,000        | 49,560,000        | 46,054,000        | 46,088,000        | 35,138,500        |
| <b>Grand total.....</b>                 | <b>56,689,000</b>      | <b>56,647,000</b> | <b>59,007,000</b> | <b>55,314,000</b> | <b>52,768,000</b> | <b>44,817,500</b> |

<sup>1</sup> For three years, 1911-1913.

## WOOD PULP.

TABLE 289.—*Wood pulp: International trade, calendar years 1909-1920.*

All kinds of pulp from wood have been taken for this item, but no pulp made from other fibrous substances. See "General note," Table 125.]

| Country.                              | Average, 1909-1913   |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| Austria-Hungary.....                  | 13,366               | 205,384              | .....                | .....                | .....                | .....                | .....                | .....                |
| Canada.....                           | 9,481                | 606,203              | 21,844               | 1,167,822            | 26,141               | 1,418,259            | 42,282               | 1,639,970            |
| Finland.....                          | 526                  | 236,881              | 221                  | 206,055              | 3                    | 304,864              | .....                | 424,441              |
| Germany.....                          | 112,660              | 384,709              | .....                | .....                | .....                | .....                | 143,027              | 28,573               |
| Norway.....                           | 64,911               | 1,437,078            | 191,776              | 1,065,837            | 158,973              | 1,123,677            | .....                | 1,317,562            |
| Sweden.....                           | 9,515                | 1,822,023            | 6,521                | 1,589,576            | 25,210               | 1,980,778            | .....                | 2,225,032            |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Argentina.....                        | 52,016               | .....                | 37,293               | .....                | 42,856               | .....                | .....                | .....                |
| Belgium.....                          | 291,254              | 80,647               | .....                | .....                | 121,205              | 3,186                | 232,497              | 34,572               |
| Denmark.....                          | 110,866              | .....                | 132,932              | .....                | 74,010               | .....                | 149,984              | .....                |
| France.....                           | 836,889              | 1,720                | 359,752              | 12                   | 590,549              | 88                   | 794,680              | 668                  |
| Italy.....                            | 179,237              | 435                  | 39,531               | .....                | 87,257               | .....                | 157,602              | 269                  |
| Japan.....                            | 79,220               | .....                | 63,934               | .....                | .....                | .....                | 104,849              | .....                |
| Portugal.....                         | 18,662               | 4,144                | 6,503                | .....                | 4,759                | .....                | .....                | .....                |
| Russia.....                           | 56,072               | 52,735               | .....                | .....                | .....                | .....                | .....                | .....                |
| Spain.....                            | 92,770               | .....                | 71,462               | .....                | 84,830               | .....                | 145,363              | .....                |
| Switzerland.....                      | 21,059               | 13,072               | 35,348               | 4,313                | 29,272               | 20,570               | 20,544               | 27,180               |
| United Kingdom.....                   | 1,891,006            | .....                | 939,337              | .....                | 2,101,613            | .....                | 2,446,535            | 112                  |
| United States.....                    | 1,007,239            | 24,309               | 1,156,418            | 44,648               | 1,272,033            | 80,114               | 1,812,595            | 68,932               |
| Other countries.....                  | 10,134               | 69,187               | 175,059              | 45                   | 99,365               | 178                  | 136,372              | 654                  |
| <b>Total.....</b>                     | <b>4,856,963</b>     | <b>4,988,507</b>     | <b>3,437,930</b>     | <b>4,078,308</b>     | <b>4,718,076</b>     | <b>9,649,580</b>     | <b>6,206,330</b>     | <b>3,580,930</b>     |

<sup>1</sup> Austria only.<sup>2</sup> Four year average.

# LIVE STOCK, 1921.

## FARM ANIMALS AND THEIR PRODUCTS.

### LIVE STOCK, ALL CLASSES.

TABLE 290.—*Live stock in undermentioned countries.*

NOTE.—In order to secure comparable totals, that pre-war estimate nearest to 1913 giving statistics for each class of animal is compared with the latest estimate available giving similar data.

[Census returns are in *italics*; other figures are in roman type.]

| Country.                                      | Date.          | Cattle.                 | Bu-<br>faloes.          | Swine.                  | Sheep.                  | Goats.                  | Horses.                 | Mules.                  | Asses.                  |
|---|----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|   |                | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> | <i>Thou-<br/>sands.</i> |
| United States:                                |                |                         |                         |                         |                         |                         |                         |                         |                         |
| On farms.....                                 | Jan. 1, 1914   | 56,592                  |                         | 58,932                  | 49,719                  | 12,915                  | 20,962                  | 4,449                   | 1,106                   |
|   | Jan. 1, 1922   | 65,352                  |                         | 56,996                  | 36,048                  | 13,459                  | 19,099                  | 5,436                   | 1,721                   |
| Not on farms.....                             | Apr. 15, 1910  | 1,879                   |                         | 1,288                   | 391                     | 115                     | 3,183                   | 370                     | 17                      |
|   | Jan. 1, 1920   | 2,112                   |                         | 2,638                   | 451                     | 105                     | 1,706                   | 378                     | 15                      |
| Alaska (on farms and<br>not on farms).....    | Jan. 1, 1910   | 1                       | 22                      | (*)                     | (*)                     | (*)                     | 2                       | 20                      | (*)                     |
|   | Jan. 1, 1920   | 1                       | 25                      | 1                       | (*)                     | (*)                     | 1                       | 18                      | (*)                     |
| Hawaii (on farms and<br>not on farms).....    | Apr. 15, 1910  | 149                     |                         | 31                      | 77                      | 5                       | 23                      | 9                       | 3                       |
|   | Jan. 1, 1920   | 142                     |                         | 30                      | 44                      | 5                       | 24                      | 11                      | 2                       |
| Porto Rico (on farms<br>and not on farms).... | Apr. 15, 1910  | 316                     |                         | 106                     | 6                       | 49                      | 53                      | 5                       | 1                       |
|   | Jan. 1, 1920   | 279                     |                         | 137                     | 4                       | 58                      | 57                      | 7                       | 1                       |
| Virgin Islands:                               |                |                         |                         |                         |                         |                         |                         |                         |                         |
| On farms.....                                 | Nov. 1, 1917   | 12                      |                         | 2                       | 1                       | 2                       | 2                       | 2                       | 1                       |
| Not on farms.....                             | do.            |                         | (*)                     | (*)                     | (*)                     | (*)                     | (*)                     | (*)                     | (*)                     |
| Algeria.....                                  | Sept. —, 1913  | 1,108                   |                         | 112                     | 8,811                   | 3,848                   | 216                     | 192                     | 272                     |
|   | 1918           | 1,090                   |                         | 125                     | 8,500                   |                         | 190                     | 170                     |                         |
| Argentina.....                                | Dec. 31, 1914  | 25,867                  |                         | 2,301                   | 43,225                  | 4,323                   | 8,324                   | 665                     | 260                     |
|   | 1920           | 27,721                  |                         | 3,199                   | 45,767                  | 4,763                   | 9,293                   | 611                     | 284                     |
| Australia.....                                | Dec. 31, 1913  | 11,484                  |                         | 801                     | 85,057                  | 262                     | 2,523                   |                         |                         |
|   | Dec. 31, 1920  | 13,373                  |                         | 754                     | 77,900                  |                         | 2,414                   |                         |                         |
| Austria.....                                  | Dec. 31, 1910  | 2,159                   | 1                       | 6,432                   | 2,426                   | 1,257                   | 1,805                   | 21                      | 53                      |
|   | Apr. —, 1920   | 2,114                   |                         | 1,159                   | 368                     |                         |                         |                         |                         |
| Azores and Madeira<br>Islands.....            | 1900           | 89                      |                         | 93                      | 87                      | 38                      | 2                       | 3                       | 9                       |
| Bahamas.....                                  | 1913           | 2                       |                         |                         | 12                      |                         | 1                       |                         |                         |
|   | 1917           | 1                       |                         |                         | 16                      |                         | 1                       |                         |                         |
| Barbados.....                                 | 1913           |                         |                         |                         |                         |                         | 2                       |                         |                         |
|   | 1917           |                         |                         |                         |                         |                         | 2                       |                         |                         |
| Basutoland.....                               | 1911           | 487                     |                         |                         | 1,369                   |                         | 83                      |                         |                         |
| Bechuanaland Pro-<br>tectorate.....           | 1911           | 324                     |                         |                         | 358                     |                         | 2                       |                         |                         |
|   | 1921           | 426                     |                         |                         | 120                     | 238                     | 2                       |                         | 6                       |
| Belgium.....                                  | Dec. 31, 1910  | 1,880                   |                         | 1,494                   | 185                     | 218                     | 517                     | 3                       | 8                       |
|   | 1921           | 1,515                   |                         | 976                     | 126                     | 33                      | 222                     |                         |                         |
| Bermuda.....                                  | 1911           | 1                       |                         |                         |                         |                         | 1                       |                         |                         |
|   | 1917           |                         |                         |                         |                         |                         | 1                       |                         |                         |
| Bolivia.....                                  | 1912           | 734                     |                         | 114                     | 1,499                   | 468                     | 99                      | 45                      | 173                     |
| Bosnia-Herzegovina                            | {Oct. 10} 1910 | 1,306                   | 1                       | 537                     | 2,499                   | 1,593                   | 222                     | (4)                     | 6                       |
|   | {Nov. 10}      |                         |                         |                         |                         |                         |                         |                         |                         |
| Brazil.....                                   | 1912-13        | 30,705                  |                         | 18,399                  | 10,653                  | 10,049                  | 7,289                   | 3,206                   |                         |
|   | 1918           | 37,500                  |                         | 17,329                  | 7,205                   | 6,920                   | 6,065                   | 3,222                   |                         |
| British Guiana.....                           | 1913           | 81                      | (*)                     | 14                      | 18                      | 14                      | 1                       | 2                       | 6                       |
|   | 30, 1918       | 77                      | (*)                     | 13                      | 21                      | 11                      | 1                       | 2                       | 5                       |

<sup>1</sup> Census 1910.

<sup>2</sup> Census 1920.

<sup>3</sup> Reindeer.

<sup>4</sup> Less than 500.

<sup>5</sup> Dogs used as work animals; mules less than 500.

<sup>6</sup> Unofficial.

<sup>7</sup> Old boundaries.

<sup>8</sup> Year 1916.



## LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

| Country.   | Date.           | Cattle.         | Buf-<br>faloes. | Swine.           | Sheep.           | Goats.           | Horses.          | Mules.           | Asses.           |
|--|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
|  |                 | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands.  |
| Bulgaria.....  | Dec. 31, 1910   | 1,603           | 415             | 527              | 8,632            | 1,459            | 478              | 12               | 117              |
|  | 1920            | 854             | 150             |                  |                  |                  | 177              |                  |                  |
| Cape Verde Islands<br>(Portuguese).....                  | 1914            | 8               |                 | 14               | 4                | 30               | 1                | 1                | 10               |
|  | 1916            | 9               |                 | 17               |                  | 38               | 1                | 1                | 17               |
| Canada.....  | June 30, 1913   | 6,656           |                 | 3,448            | 2,129            |                  | 2,866            |                  |                  |
|  | June 30, 1921   | 10,206          |                 | 3,905            | 3,676            |                  | 3,814            | 10               |                  |
| Cayman Islands.....                                      | 1913            | 2               |                 | 1                |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |                  |
|  | 1918            | 1               |                 | 1                |                  |                  |                  |                  |                  |
| Ceylon.....  | 1913            | 1,484           |                 | 86               | 90               |                  | 5                |                  |                  |
|  | * 1919          | 1,599           |                 | 59               | 68               | 130              | 4                |                  |                  |
| Chile.....   | 1913            | 2,084           |                 | 184              | 4,567            | 283              | 439              | 34               | 30               |
|  | 1919            | 2,163           |                 | 292              | 4,500            | 400              | 392              | 51               | 36               |
| China.....   | 1914            | 21,997          |                 | 76,819           | 22,136           |                  | 4,934            |                  | 4,394            |
| Columbia.....  | 1915            | 3,035           |                 | 711              | 164              |                  | 526              | 201              | 139              |
| Costa Rica.....  | 1914            | 536             |                 | 64               | ( <sup>1</sup> ) | 1                | 52               | 2                | ( <sup>1</sup> ) |
| Croatia-Slavonia.....                                    | Mar. 24, 1911   | 1,135           |                 | 1,164            | 350              | 96               | 350              | 3                |                  |
| Cuba.....  | Dec. 31, 1913   | 3,141           |                 |                  |                  |                  | 625              | 46               | 2                |
|  | * Dec. 31, 1918 | 3,965           |                 |                  |                  |                  | 779              | 65               |                  |
| Cyprus.....  | Mar. 31, 1913   | 61              |                 | 40               | 10 256           | 263              | 69               |                  |                  |
|  | 1921            | 52              |                 | 17               | 266              | 169              | 4                | 51               |                  |
| Czecho-Slovakia.....                                     | Dec. 31, 1920   | 4,213           |                 | 2,015            | 976              | 1,174            | 581              |                  |                  |
| Denmark.....   | July 15, 1914   | 2,463           |                 | 2,487            | 515              | 41               | 587              |                  |                  |
|  | July 15, 1921   | 2,501           |                 | 1,430            | 522              | 50               | 598              |                  |                  |
| Dominican Republic<br>(Santo Domingo).....               | * May 15, 1921  | 647             |                 | 674              |                  | 706              | 163              | 65               |                  |
| Dominica (British).....                                  | 1903            | 1               |                 |                  | 1                |                  | 1                |                  |                  |
| Dutch East Indies:<br>Java and Madura.....               | 1915            | 3,243           | 2,541           |                  |                  |                  | 304              |                  |                  |
|  | * Dec. 31, 1919 | 3,699           | 2,128           | 66               | 739              | 2,269            | 286              |                  |                  |
| Other possessions.....                                   | 1915            | 719             |                 |                  |                  |                  | 333              |                  |                  |
|  | * Dec. 31, 1919 | 641             | 959             | 600              | 114              | 309              | 307              |                  |                  |
| Dutch West Indies:<br>Curacao and de-<br>pendencies..... | 1913            | 3               |                 | 4                | 12               | 46               | 1                | ( <sup>1</sup> ) | 4                |
|  | 1918            | 3               |                 | 3                | 27               | 70               | 1                | ( <sup>1</sup> ) | 5                |
| Surinam or Dutch<br>Gulans.....                          | 1913            | 8               |                 | 5                | ( <sup>1</sup> ) | 3                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                |
|  | 1918            | 10              |                 | 3                | ( <sup>1</sup> ) | 2                |                  | 1                |                  |
| Egypt <sup>12</sup> .....                                | 1914            | 601             | 568             |                  | 816              | 331              | 40               | 22               | 632              |
|  | Sept.-Oct. 1921 | 596             | 646             |                  | 936              | 424              | 34               | 19               | 623              |
| Estonia <sup>1</sup> .....                               | 1920            | 443             |                 | 261              | 530              |                  | 165              |                  |                  |
| Falkland Islands<br>(British).....                       | 1913            | 8               |                 | ( <sup>1</sup> ) | 608              |                  | 4                |                  |                  |
|  | * 1918          | 7               |                 |                  | 699              |                  | 3                |                  |                  |
| Faroe Islands (Da-<br>nish).....                         | 1914            | 4               |                 | ( <sup>1</sup> ) | 112              | ( <sup>1</sup> ) | 1                |                  |                  |
|  | 1919            | 4               |                 |                  | 69               | ( <sup>1</sup> ) | 1                |                  |                  |
| Fiji Islands (British).....                              | 14 1913         | 49              |                 | 2                | 3                |                  |                  | 7                |                  |
|  | * 1919          | 62              |                 |                  | 2                | 12               |                  | 10               |                  |

<sup>1</sup> Less than 500.<sup>2</sup> Unofficial.<sup>3</sup> Old boundaries.<sup>4</sup> In addition there were 42,019 alpacas in 1919.<sup>5</sup> One year of age and over.<sup>6</sup> Including incorporated South Jutland Provinces where census was taken in October, 1920.<sup>7</sup> In addition there were 113,414 camels in 1914, and 145,966 in 1921.<sup>8</sup> Excluding the District of Petseri.<sup>9</sup> Animals owned by Europeans.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

| Country.   | Date.                                | Cattle.            | Buffaloes.        | Swine.           | Sheep.           | Goats.              | Horses.           | Mules.           | Asses.           |
|--|--------------------------------------|--------------------|-------------------|------------------|------------------|---------------------|-------------------|------------------|------------------|
|  |                                      | Thous.<br>sands.   | Thous.<br>sands.  | Thous.<br>sands. | Thous.<br>sands. | Thous.<br>sands.    | Thous.<br>sands.  | Thous.<br>sands. | Thous.<br>sands. |
| Finland.....                                       | 1910<br>Sept. 1, 1920                | 1,573<br>1,812     | 121<br>53         | 418<br>370       | 1,359<br>1,032   | 13<br>13            | 361<br>372        |                  |                  |
| France <sup>15</sup> .....                         | Dec. 31, 1913<br>Dec. 31, 1920       | 14,788<br>12,782   |                   | 7,036<br>4,584   | 16,131<br>9,372  | 1,435<br>1,220      | 3,222<br>2,542    | 188<br>181       | 356<br>283       |
| Alsace-Lorraine.....                               | Dec. 1, 1913<br>Dec. 1, 1920         | 550<br>435         |                   | 493<br>353       | 44<br>34         | 74<br>112           |                   | 2                | 1                |
| French Equatorial<br>Africa (French<br>Congo)..... | 1913                                 | 400                |                   | 150              | 1,000            | 1,500               | 20                |                  |                  |
| French establish-<br>ments in India.....           | 1913<br>1918                         | 51<br>50           |                   |                  | 13<br>18         | 24<br>25            |                   |                  |                  |
| French Guiana.....                                 | 1916                                 | 6                  | (*)               | 7                | (*)              | (*)                 | (*)               |                  |                  |
| French Guinea.....                                 | 1914<br>1919                         | 400<br>420         |                   |                  | 150<br>102       | 140<br>2            | 3<br>3            |                  |                  |
| French Indo-China:<br>Annam.....                   | 1914                                 | 215                |                   |                  |                  |                     |                   |                  |                  |
| Cochin-China.....                                  | 1914<br>1920                         | 109<br>435         | 242<br>435        | 709<br>277       | 3<br>3           |                     | 12                |                  |                  |
| Germany <sup>16</sup> .....                        | Dec. 1, 1913<br>Dec. 1, 1921         | 20,444<br>16,840   |                   | 25,168<br>15,876 | 5,476<br>8,882   | 3,474<br>4,337      | 3,227<br>3,683    | 27               | 6                |
| Grenada (British).....                             | 1911<br>1918                         | 5                  |                   | 2                | 4                | 5                   | 2                 | 1                | 1                |
| Greece.....  | 1914<br>1920                         | 300<br>659         | 25<br>9           | 227<br>416       | 3,547<br>5,811   | 2,638<br>3,418      | 149<br>201        | 80<br>364        | 133              |
| Guam.....  | 1913                                 | 6                  |                   |                  |                  |                     |                   |                  |                  |
| Guatemala.....                                     | 1913<br>1920                         | 557<br>700         |                   | 138<br>100       | 514<br>300       | 11<br>150           | 64                | 33               |                  |
| Honduras <sup>17</sup> .....                       | 1913-14<br>1919                      | 488<br>103         |                   | 180<br>23        | 5<br>(*)         | 23<br>(*)           | 68<br>13          | 20<br>3          | 4<br>(*)         |
| Hongkong (British).....                            | 1913<br>1919                         | 1<br>2             |                   |                  |                  | (*)<br>(*)          |                   |                  |                  |
| Hungary.....                                       | Apr. 30, 1913<br>1920                | 6,045<br>2,148     | 162               | 6,325<br>3,320   | 6,560<br>1,817   | 269                 | 2,005<br>718      | 1                | 16               |
| Iceland.....                                       | 1913<br>1919                         | 27<br>23           |                   |                  | 635<br>583       | 1<br>2              | 47<br>58          |                  |                  |
| India (British).....                               | 1913-14<br>Dec. to Apr.,<br>1919-20. | 124,965<br>117,428 | 121,214<br>28,428 |                  | 23,081<br>21,984 | 19 30,694<br>24,134 | 19 1,644<br>1,699 | 19 79<br>75      | 1,508<br>1,572   |
| India (native States).....                         | 1913-14<br>Dec. to Apr.,<br>1919-20. | 12,254<br>15,109   | 1 1,772<br>3,811  |                  | 8,326<br>8,188   |                     | 176<br>4,536      |                  | 152<br>5         |
| Italy.....   | Mar. 19, 1908<br>Apr. 6, 1918        | 6,199<br>6,240     | 19<br>24          | 2,508<br>2,339   | 11,168<br>11,754 | 2,715<br>3,083      | 958<br>20 990     | 388<br>497       | 830<br>849       |
| Ivory Coast (French).....                          | 1918                                 | 53                 |                   | 11               | 186              | 168                 | 1                 |                  | (*)              |
| Jamaica.....                                       | 1913<br>1918                         | 116<br>167         |                   | 31<br>32         | 10<br>12         |                     | 53                |                  |                  |
| Japan.....   | Dec. 31, 1913<br>1919                | 1,339<br>1,345     |                   | 310<br>470       | 3<br>5           | 89<br>125           | 1,582<br>1,490    |                  |                  |
| Chosen (Korea).....                                | Dec. 31, 1913<br>Dec. 31, 1920       | 1,211<br>1,490     |                   | 761<br>977       | (*)              | 10<br>21            | 51<br>55          | 1<br>2           | 13<br>10         |

<sup>15</sup> Reindeer.

<sup>16</sup> Less than 500.

<sup>17</sup> Unofficial.

<sup>18</sup> Old boundaries.

<sup>19</sup> Exclusive of Alsace-Lorraine.

<sup>20</sup> Exclusive of army horses.

<sup>21</sup> Enumerated from tax returns.

<sup>22</sup> Buffalo calves included with cattle.

<sup>23</sup> Exclusive of Bengal.

<sup>24</sup> Including 855 in transit and 196,328 belonging to the Royal army.

## LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

| Country.   | Date.                 | Cattle.         | Buf-<br>faloes. | Swine.           | Sheep.           | Goats.          | Horses.          | Mules.           | Asses.           |
|--|-----------------------|-----------------|-----------------|------------------|------------------|-----------------|------------------|------------------|------------------|
|  |                       | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands. | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands.  |
| Japan—Continued.   |                       |                 |                 |                  |                  |                 |                  |                  |                  |
| Formosa (Taiwan)   | Dec. 31, 1913         | 1               | 21 418          | 1,322            | ( <sup>4</sup> ) | 129             | ( <sup>4</sup> ) |                  |                  |
|  | Dec. 31, 1918         | 385             |                 | 1,279            | 99               |                 | ( <sup>4</sup> ) |                  |                  |
| Karafuto (Japan-<br>ese).....                                    | Dec. 31, 1913         | 1               |                 | ( <sup>4</sup> ) |                  |                 | 2                |                  |                  |
|  | Dec. 31, 1918         | 1               |                 | 1                |                  |                 | 4                |                  |                  |
| Kwantung (leased<br>province of<br>Japan).....                   | Dec. 31, 1913         | 31              |                 | 66               | 1                | 12              | 3                | 13               |                  |
|  | Dec. 31, 1917         | 31              |                 | 76               | 1                | 6               | 3                | 13               | 27               |
| Kenya Colony and<br>Protectorate (Brit-<br>ish East Africa)..... | Nov. 31, 1913         | 780             |                 | 3                | 6,500            |                 | 1                |                  |                  |
|  | June 30, 1920         | 2,512           |                 | 9                | 2,688            | 5,879           | 21               | 1                | 32               |
| Latvia.....  | 1921                  | 780             |                 | 482              | 1,332            |                 | 282              |                  |                  |
| Libia (Italian).....   | 1910                  | 45              |                 |                  | 996              | 680             | 34               | ( <sup>4</sup> ) | 39               |
| Lithuania.....   | * 1920                | 865             |                 | 1,400            | 730              |                 | 380              |                  |                  |
| Luxemburg.....   | Dec. 1, 1913          | 102             |                 | 157              | 5                | 10              | 19               |                  |                  |
|  | Dec. 4, 1919          | 89              |                 | 89               | 5                | 13              | 18               | ( <sup>4</sup> ) | ( <sup>4</sup> ) |
| Madagascar.....  | * 1915                | 6,151           |                 | 600              | 295              | 200             | 3                |                  |                  |
|  | * 1920                | 7,519           |                 | 457              | 166              | 116             | 2                | ( <sup>4</sup> ) |                  |
| Malta.....   | Mar. 31, 1913         | 4               |                 | 4                | 15               |                 | 9                |                  |                  |
|  | Mar. 31, 1920         | 4               |                 |                  | 19               | 18              |                  |                  |                  |
|  | 1913                  | 22              |                 | 8                | 1                |                 | 1                |                  |                  |
| Mauritius <sup>22</sup> .....                                    | Dec. 31, 1920         | 17              |                 | 4                | 1                | 6               | 1                |                  |                  |
| Mexico.....  | June 30, 1902         |                 |                 |                  |                  |                 |                  |                  |                  |
|  | * 1921                | 5,142           |                 | 616              | 3,424            | 4,206           | 859              | 334              | 238              |
|  |                       | 2,304           |                 | 1,913            | 24 293           | 24 1,254        | 635              | 133              | 168              |
| Morocco:   |                       |                 |                 |                  |                  |                 |                  |                  |                  |
| Eastern.....   | 1915-16               | 22              |                 |                  | 664              | 285             |                  |                  |                  |
| Western.....   | May-June,<br>1915-16. | 856             |                 | 29               | 4,054            | 1,227           | 141              |                  | 251              |
|  | 1921                  | 1,300           | 28 86           | 130              | 6,600            | 2,000           | 65               | 54               | 420              |
| Mozambique.....  | 1916                  | 38              |                 | 24               | 10               | 34              |                  |                  |                  |
| Netherlands.....   | June —, 1913          | 2,097           |                 | 1,350            | 842              | 232             | 334              |                  |                  |
|  | Mar. —, 1921          | 2,083           |                 | 1,519            | 668              | 272             | 364              |                  |                  |
| New Caledonia.....   | ( <sup>4</sup> )      | 130             |                 | 25               | 25               | 25              |                  |                  |                  |
| Newfoundland (Brit-<br>ish).....                                 | 1911                  | 32              |                 | 19               | 75               | 15              | 15               |                  |                  |
| New Zealand.....   | Apr. —, 1911          | 2,020           |                 | 349              | 23,996           |                 | 404              | ( <sup>4</sup> ) |                  |
|  | 1921                  | 3,139           |                 | 350              | 23,285           | 17              | 337              | ( <sup>4</sup> ) |                  |
| Norway.....  | Sept. 30, 1914        | 1,146           |                 | 228              | 1,327            | 237             | 182              |                  |                  |
|  | June 20, 1918         | 1,038           |                 | 209              | 1,185            | 199             | 210              |                  |                  |
| Nyasaland Protecto-<br>rate.....                                 | Mar. 31, 1913         | 63              |                 | 22               | 23               | 138             |                  | ( <sup>4</sup> ) |                  |
|  | * 1919                | 84              |                 | 21               | 40               | 149             |                  | ( <sup>4</sup> ) |                  |
| Palestine.....   | * 1921                |                 |                 |                  | 262              | 272             |                  | 29               |                  |
| Panama.....  | 1916                  | 200             |                 | 30               |                  | 5               | 15               | 2                |                  |
| Papua, Territory of<br>(British).....                            | 1913                  | 2               |                 | ( <sup>4</sup> ) | ( <sup>4</sup> ) |                 | ( <sup>4</sup> ) | ( <sup>4</sup> ) |                  |
|  | * 1918                | 1               |                 |                  |                  |                 | ( <sup>4</sup> ) | ( <sup>4</sup> ) |                  |

<sup>4</sup> Less than 500.<sup>6</sup> Unofficial.<sup>17</sup> Enumerated from tax returns.<sup>21</sup> Includes zebus.<sup>22</sup> In addition there were 103,152 camels owned by natives.<sup>23</sup> Animals on sugar estates only.<sup>24</sup> In addition there were 216,440 designated as sheep and goats.<sup>25</sup> Camels.<sup>26</sup> Incomplete.

LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

| Country.   | Date.                          | Cattle.         | Bu-<br>faloes.            | Swine.           | Sheep.                               | Goats.          | Horses.                              | Mules.           | Asses.           |
|--|--------------------------------|-----------------|---------------------------|------------------|--------------------------------------|-----------------|--------------------------------------|------------------|------------------|
|  |                                | Thou-<br>sands. | Thou-<br>sands.           | Thou-<br>sands.  | Thou-<br>sands.                      | Thou-<br>sands. | Thou-<br>sands.                      | Thou-<br>sands.  | Thou-<br>sands.  |
| Paraguay.....  | 1915<br>Dec. 31, 1918          | 5,249<br>5,500  | .....<br>.....            | 61<br>87         | 600<br>600                           | 87<br>93        | 478<br>490                           | 17<br>19         | 18<br>20         |
| Peru.....  | " 1921                         | 250             | .....                     | .....            | 27 10,050                            | .....           | 30                                   | 50               | .....            |
| Philippine Islands.....  | Dec. 31, 1913<br>Dec. 31, 1919 | 418<br>679      | 28 1,047<br>28 1,388      | 2,087<br>3,130   | 104<br>168                           | 528<br>732      | 179<br>255                           | .....            | .....            |
| Portugal.....  | Oct. —, 1906<br>Mar. —, 1920   | 703<br>741      | .....<br>.....            | 1,111<br>921     | 3,073<br>3,351                       | 1,034<br>1,493  | 88                                   | 58               | 144              |
| Portuguese East Africa   | " 1921                         | 191             | .....                     | .....            | .....                                | .....           | .....                                | .....            | .....            |
| Poland <sup>28</sup> .....   | Summer, 1913<br>Sept. 30, 1921 | 2,011<br>7,861  | ( <sup>1</sup> )<br>..... | 491<br>5,101     | 683<br>2,063                         | 9               | 1,116<br>3,187                       | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Rhodesia:<br>Southern.....   | Dec. 31, 1914                  | 748             | .....                     | 14 13            | 324                                  | 675             | .....                                | 28 3             | .....            |
| .....  | Jan. 1, 1921                   | 1,504           | .....                     | .....            | .....                                | .....           | .....                                | .....            | .....            |
| Northern.....  | 1912                           | 255             | .....                     | .....            | .....                                | .....           | .....                                | .....            | .....            |
| Rumania.....   | " 1911                         | 2,687           | .....                     | 1,021            | 5,269                                | 187             | 825                                  | 4                | .....            |
| .....  | 1920                           | 4,730           | 146                       | 2,514            | 8,690                                | 500             | 1,485                                | 12               | .....            |
| Russia (European)...   | <sup>28</sup> Summer,<br>1913. | 31,974          | <sup>28</sup> 605         | 13,458           | 41,426                               | 873             | 22,771                               | 6                | 7                |
| Russia (Asiatic) (33<br>governments of the<br>Caucasus, central<br>Asia, and Siberia)... | Summer, 1913                   | 18,404          | .....                     | 2,895            | 33,696                               | 4,791           | 11,959                               | .....            | .....            |
| Russia and Ukraine<br>(Soviet).....  | 1921                           | 38,132          | .....                     | 13,501           | 47,157                               | .....           | 23,670                               | .....            | .....            |
| Salvador.....  | 1906                           | 284             | .....                     | 423              | 21                                   | .....           | 74                                   | .....            | .....            |
| St. Helena (British)...  | 1911                           | 1               | .....                     | ( <sup>1</sup> ) | 4                                    | 1               | ( <sup>1</sup> )                     | .....            | .....            |
| St. Lucia (British)...   | 1914<br>1916                   | .....<br>.....  | .....<br>.....            | .....<br>.....   | .....<br>.....                       | .....<br>.....  | 1<br>1                               | .....            | .....            |
| Senegal.....   | " 1919                         | 417             | .....                     | .....            | .....                                | .....           | .....                                | .....            | .....            |
| Serbin.....  | Dec. 31, 1910                  | 957             | 7                         | 806              | 3,819                                | 681             | 153                                  | 1                | .....            |
| Shetland Islands.....  | 1919                           | 14              | .....                     | ( <sup>1</sup> ) | 141                                  | .....           | 5                                    | .....            | .....            |
| Seychelles Islands<br>(British).....   | 1913<br>" 1919                 | 1<br>1          | .....                     | 6                | ( <sup>1</sup> )<br>( <sup>1</sup> ) | 1               | ( <sup>1</sup> )<br>( <sup>1</sup> ) | .....            | .....            |
| Siam.....  | Jan. 1, 1916<br>Mar. 31, 1920  | 2,337<br>2,621  | 2,120<br>2,508            | .....<br>750     | .....                                | .....           | 105<br>28 133                        | .....            | .....            |
| Somaland (Italian)...  | Feb. 1, 1920                   | 1,646           | .....                     | .....            | 1,666                                | .....           | 11                                   | 28 101           | .....            |
| Southwest Africa<br>Protectorate (for-<br>mer German South-<br>west Africa).             | " 1914<br>" 1920               | 239<br>400      | .....                     | .....            | 1,125<br>2,225                       | .....           | 17                                   | .....            | .....            |
| Spain.....   | 1915<br>1921                   | 2,879<br>5,718  | .....                     | 2,710<br>5,158   | 16,441<br>20,532                     | 3,394<br>4,298  | 542<br>722                           | 918<br>1,295     | 349<br>1,133     |

<sup>1</sup> Reindeer.

<sup>2</sup> Less than 500.

<sup>3</sup> Unofficial.

<sup>4</sup> Old boundaries.

<sup>5</sup> Animals owned by Europeans.

<sup>6</sup> Camels.

<sup>7</sup> Includes 50,000 vicuñas.

<sup>8</sup> Carabao only.

<sup>9</sup> Pre-war figures are for former Russian or Congress Poland, while the post-war figures give the number of live stock within the Polish frontier in 1921, previous to a decision being reached concerning Upper Silesia.

<sup>10</sup> Animals owned by natives only.

<sup>11</sup> 51 governments, Poland excluded.

<sup>12</sup> In addition there were 6,294 elephants.

## LIVE STOCK, ALL CLASSES—Continued.

TABLE 290.—Live stock in undermentioned countries—Continued.

| Country.  | Date.                          | Cattle.                                    | Buf-<br>faloes.                          | Swine.                               | Sheep.                               | Goats.                                 | Horses.                              | Mules.                               | Asses.                                 |
|---|--------------------------------|--|--|--------------------------------------|--------------------------------------|--|--------------------------------------|--------------------------------------|--|
|   |                                | Thou-<br>sands.                            | Thou-<br>sands.                          | Thou-<br>sands.                      | Thou-<br>sands.                      | Thou-<br>sands.                        | Thou-<br>sands.                      | Thou-<br>sands.                      | Thou-<br>sands.                        |
| Straits Settlements<br>and Labuan.                          | 1913<br>1917                   | 46<br>55                                   | .....                                    | 158<br>220                           | .....                                | .....                                  | 2<br>2                               | .....                                | .....                                  |
| Swaziland.....  | 1913<br>1920                   | 73<br>230                                  | .....                                    | 9<br>9                               | 170<br>250                           | .....                                  | 1<br>1                               | .....                                | .....                                  |
| Sweden.....   | Dec. 31, 1913<br>June 1, 1919  | 2,721<br>2,551                             | .....                                    | 968<br>717                           | 988<br>1,564                         | 71<br>133                              | 595<br>716                           | .....                                | .....                                  |
| Switzerland.....  | Apr. 21, 1911<br>Apr. 21, 1921 | 1,439<br>1,425                             | .....                                    | 570<br>639                           | 161<br>244                           | 541<br>329                             | 144<br>134                           | 5<br>4                               | 2<br>1                                 |
| Tanganyika Territory<br>(former German<br>East Africa)..... | 1912                           | 3,994                                      | .....                                    | .....                                | 6,440                                | .....                                  | .....                                | .....                                | .....                                  |
| Trinidad and Tobago.  | 1913<br>1917                   | 13<br>11                                   | .....                                    | 9<br>.....                           | 2<br>4                               | .....                                  | 5<br>12                              | .....                                | .....                                  |
| Tunis <sup>17</sup> .....                                   | Dec. 31, 1913<br>1920          | 217<br>537                                 | .....                                    | 17<br>19                             | 729<br>2,183                         | 505<br>285                             | 37<br>75                             | 23<br>30                             | 95<br>164                              |
| Turkey (European<br>and Asiatic).                           | 1913<br>1919                   | <sup>33</sup> 3,835<br><sup>33</sup> 3,740 | <sup>34</sup> 2,697<br><sup>34</sup> 378 | .....                                | 13,722<br>11,200                     | 16,463<br>2,065                        | 711<br>630                           | 145<br>85                            | 1,374<br>825                           |
| Turks and Caicos<br>Islands (British).                      | 1913<br>1917                   | 1<br>1                                     | .....                                    | ( <sup>1</sup> )<br>( <sup>1</sup> ) | ( <sup>1</sup> )<br>( <sup>1</sup> ) | .....                                  | ( <sup>1</sup> )<br>( <sup>1</sup> ) | .....                                | .....                                  |
| Upper Senegal and<br>Niger (French).....                    | July 1913                      | 1,299                                      | .....                                    | 1                                    | 2,161                                | 2,363                                  | 69                                   | ( <sup>1</sup> )                     | 134                                    |
| Union of South Africa.                                      | Dec. 31, 1911<br>1920          | 5,797<br>7,655                             | .....                                    | 1,082<br>943                         | 30,657<br>29,305                     | 11,763<br>7,640                        | 719<br>793                           | 94<br>95                             | 537<br>604                             |
| United Kingdom.....   | 1913<br>June 4, 1921           | 11,937<br>11,893                           | .....                                    | 3,306<br>3,639                       | 27,629<br>24,273                     | <sup>35</sup> 246<br><sup>35</sup> 261 | 1,874<br>1,903                       | <sup>36</sup> 30<br><sup>36</sup> 27 | <sup>37</sup> 243<br><sup>37</sup> 230 |
| Uganda Protectorate.  | <sup>38</sup> 1913<br>1917     | 775<br>665                                 | .....                                    | .....                                | 537<br>245                           | .....                                  | ( <sup>1</sup> )<br>( <sup>1</sup> ) | .....                                | .....                                  |
| Uruguay.....  | 1908<br>Apr. 20, 1916          | 8,193<br>7,803                             | .....                                    | 180<br>304                           | 23,226<br>11,475                     | 20<br>12                               | 556<br>555                           | 18<br>14                             | .....<br>5                             |
| Venezuela.....  | 1912<br>1920                   | 2,004<br>2,078                             | .....                                    | 1,613<br>512                         | 177<br>113                           | 1,667<br>2,155                         | 191<br>168                           | 89<br>55                             | 313<br>200                             |
| Yugoslavia.....   | Jan. 31, 1921                  | 4,834                                      | 51                                       | 3,281                                | 6,773                                | 1,544                                  | 1,059                                | 17                                   | 82                                     |
| Grand totals: <sup>37</sup>                                 |                                |  |  |                                      |                                      |  |                                      |                                      |  |
| Prewar.....   |                                | <sup>38</sup> 479,554                      | <sup>38</sup> 30,249                     | 130,671                              | <sup>40</sup> 548,383                | <sup>40</sup> 112,392                  | <sup>41</sup> 112,330                | <sup>42</sup> 8,099                  | <sup>42</sup> 7,749                    |
| Recent.....   |                                | <sup>43</sup> 492,072                      | <sup>43</sup> 40,267                     | 169,167                              | <sup>41</sup> 465,895                | <sup>41</sup> 84,564                   | <sup>41</sup> 100,524                | <sup>43</sup> 9,353                  | <sup>43</sup> 7,745                    |

<sup>4</sup> Less than 500.<sup>6</sup> Unofficial.<sup>17</sup> Enumerated from tax returns.<sup>38</sup> Excludes territories of Mesopotamia, Palestine, Syria, and Arabia.<sup>34</sup> Includes oxen.<sup>35</sup> Ireland only.<sup>36</sup> Exclusive of horned cattle and sheep in certain provinces and districts.

<sup>37</sup> Totals include figures only for countries having comparable data. In order to include in the grand totals the territories formerly belonging to Russia, the figures for Russian or Congress Poland, and Russia (European and Asiatic) for 1913 have been added in the prewar totals while the most recent estimates available for Soviet Russia (including Soviet Ukraine), Poland (1921 boundaries, including some former German and Austrian territory) and the Balkan States Estonia, Latvia, and Lithuania have been included in the post-war totals. Figures for Czechoslovakia and Yugoslavia are included in the total of recent estimates, since they were included in the prewar estimates in the countries to which they formerly belonged.

<sup>38</sup> 36,042,000 designated as "cattle and buffaloes" included with cattle.<sup>39</sup> 435,000 designated as "cattle and buffaloes" included with cattle.<sup>40</sup> 9,932,000 designated as "sheep and goats" included with sheep.<sup>41</sup> 50,990,000 designated as "sheep and goats" included with sheep.<sup>42</sup> 3,614,000 designated as "horses, mules, and asses" or "mules and asses" or "horses and mules" included with horses.<sup>43</sup> 3,825,000 designated as "horses, mules, and asses" or "mules and asses" or "horses and mules" included with horses.

## HIDES AND SKINS.

TABLE 291.—Hides and skins: International trade, calendar years 1909-1920.

GENERAL NOTE.—Substantially the international trade of the world. It should not be expected that the world export and import totals for any year will agree. Among sources of disagreement are these: (1) Different periods of time covered in the "year" of the various countries; (2) imports received in year subsequent to year of export; (3) want of uniformity in classification of goods among countries; (4) different practices and varying degrees of failure in recording countries of origin and ultimate destination; (5) different practices of recording reexported goods; (6) opposite methods of treating free ports; (7) clerical errors, which, it may be assumed, are not infrequent.

The exports given are domestic exports, and the imports given are imports for consumption as far as it is feasible and consistent so to express the facts. While there are some inevitable omissions, on the other hand there are some duplications because of reshipments that do not appear as such in official reports. For the United Kingdom, import figures refer to imports for consumption, when available, otherwise total imports, less exports, of "foreign and colonial merchandise." Figures for the United States include Alaska, Porto Rico, and Hawaii.

| Country.                              | Average, 1909-1913.  |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| Argentina.....                        | 207                  | 293,950              |                      | 241,331              |                      | 299,032              |                      |                      |
| Brazil.....                           |                      | 83,232               |                      | 104,995              |                      | 134,964              |                      | 8,732                |
| British India.....                    | 20,376               | 169,857              | 12,944               | 80,524               | 13,234               | 196,236              | 10,555               | 91,971               |
| British South Africa.....             | 221                  | 51,159               | 2,253                | 45,578               | 2,566                | 79,867               | 1,247                | 51,766               |
| China.....                            | 2,317                | 72,751               | 3,648                | 85,893               | 3,754                | 94,707               | 3,223                | 68,522               |
| Chosen (Korea).....                   | 64                   | 4,944                |                      |                      |                      |                      |                      |                      |
| Cuba.....                             | 166                  | 14,298               | 24                   | 28,454               |                      | 405                  |                      |                      |
| Denmark.....                          | 9,942                | 21,998               | 332                  | 7,409                | 5,638                | 12,135               | 4,176                | 9,606                |
| Dutch East Indies.....                | 135                  | 16,708               | 222                  | 8,360                | 345                  | 32,176               |                      |                      |
| Egypt.....                            |                      | 10,754               | 176                  | 6,386                | 263                  | 5,943                | 223                  | 5,064                |
| Mexico.....                           | 107                  | 41,012               |                      |                      |                      |                      |                      |                      |
| New Zealand.....                      | 752                  | 25,577               | 430                  | 31,742               | 503                  | 32,727               | 611                  | 35,661               |
| Peru.....                             |                      | 6,185                |                      | 3,824                |                      | 7,351                |                      |                      |
| Switzerland.....                      | 6,659                | 22,866               | 513                  | 21                   | 1,519                | 4,324                | 1,944                | 4,102                |
| Uruguay.....                          |                      | 71,105               |                      | 152,741              |                      |                      |                      |                      |
| Venezuela.....                        |                      | 9,764                | 1                    | 5,032                | 83                   | 16,129               |                      | 6,810                |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Austria-Hungary.....                  | 87,566               | 79,265               |                      |                      |                      |                      | 5,438                |                      |
| Belgium.....                          | 180,930              | 117,213              |                      |                      | 30,647               | 11,413               | 40,525               | 17,935               |
| Canada.....                           | 46,830               | 45,469               | 17,640               | 19,000               | 37,543               | 46,000               | 33,772               | 33,501               |
| Finland.....                          | 10,717               | 7,138                | 117                  |                      | 9,506                | 406                  | 4,357                | 123                  |
| France.....                           | 155,508              | 131,041              | 44,650               | 4,379                | 152,323              | 53,863               | 111,179              | 54,670               |
| Germany.....                          | 440,200              | 152,373              |                      |                      |                      |                      | 93,082               | 1,080                |
| Greece.....                           | 5,770                | 2,283                | 6,300                | 4,078                | 8,062                | 6,707                | 7,831                | 3,629                |
| Italy.....                            | 53,524               | 48,428               | 68,465               | 308                  | 92,990               | 6,304                | 55,721               | 17,573               |
| Japan.....                            | 6,321                | 710                  | 21,789               |                      | 22,575               |                      | 25,323               |                      |
| Netherlands.....                      | 73,691               | 67,636               | 852                  | 1,625                | 31,483               | 43,516               | 40,709               | 42,180               |
| Norway.....                           | 13,979               | 13,852               | 1,165                | 356                  | 11,421               | 5,172                | 5,154                | 6,511                |
| Portugal.....                         | 6,804                | 3,121                | 4,532                | 1,436                | 5,335                | 3,836                |                      |                      |
| Rumania.....                          | 7,223                | 2,876                |                      |                      | 449                  | 55                   | 8,785                | 1,272                |
| Russia.....                           | 110,143              | 96,351               | 5,509                | 1,717                |                      |                      | 5,044                | 3,948                |
| Singapore.....                        | 9,332                | 6,436                |                      |                      |                      |                      |                      |                      |
| Spain.....                            | 19,119               | 17,467               | 25,719               | 4,843                | 35,077               | 14,807               | 30,049               | 6,806                |
| Sweden.....                           | 25,662               | 24,130               | 5,391                | 40                   | 26,648               | 3,536                | 26,260               | 8,774                |
| United Kingdom.....                   | 107,350              | 38,100               | 189,052              | 2,364                | 148,973              | 7,390                | 121,693              | 17,069               |
| United States.....                    | 514,249              | 25,432               | 361,891              | 5,105                | 744,836              | 24,924               | 510,240              | 17,402               |
| Other countries.....                  | 43,767               | 195,862              | 6,307                | 80,097               | 5,812                | 96,396               | 2,432                | 35,630               |
| Total.....                            | 1,950,521            | 1,991,355            | 763,664              | 921,457              | 1,374,188            | 1,234,737            | 1,070,609            | 454,424              |

1 Four-year average.

## MEAT AND MEAT PRODUCTS.

TABLE 292.—Meat and meat products: International trade, calendar years 1911–1920.

[See "General Note," Table 290.]

| Country.                              | Average 1911–1913.   |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| Argentina.....                        | 3,487                | 1,173,461            | 346                  | 1,960,499            | 296                  | 1,593,704            | .....                | .....                |
| Australia.....                        | 1,967                | 507,143              | 1,211                | 370,286              | 1,643                | 521,487              | .....                | .....                |
| Brazil.....                           | 54,012               | 1,520                | 7,919                | 214,940              | 3,194                | 251,192              | 11,071               | 192,937              |
| British South Africa.....             | 32,479               | 537                  | 7,271                | 19,143               | 6,434                | 46,481               | 17,847               | 14,250               |
| Canada.....                           | 43,327               | 60,242               | 33,176               | 302,364              | 74,842               | 410,481              | 70,111               | 203,013              |
| China.....                            | 85                   | 64,684               | 1,324                | 89,195               | 1,221                | 148,088              | 1,612                | 89,599               |
| Denmark.....                          | 32,184               | 368,188              | 1,274                | 60,816               | 33,482               | 34,177               | 8,170                | 157,661              |
| New Zealand.....                      | 960                  | 326,539              | 1,865                | 272,528              | 1,007                | 552,770              | 1,584                | 593,445              |
| Russia.....                           | 130,897              | 53,175               | .....                | .....                | .....                | .....                | .....                | .....                |
| United States.....                    | 18,719               | 1,277,524            | 34,490               | 3,061,873            | 107,643              | 3,118,727            | 196,425              | 1,851,692            |
| Uruguay.....                          | 1,702                | 196,911              | .....                | 350,291              | .....                | 407,028              | .....                | 289,410              |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Austria-Hungary.....                  | 49,268               | 12,420               | .....                | .....                | .....                | .....                | 179,496              | 7,208                |
| Belgium.....                          | 179,120              | 127,067              | .....                | .....                | 158,778              | 113,204              | 154,770              | 57,999               |
| Cuba.....                             | 128,362              | (1,*)                | 131,106              | .....                | 141,005              | 12                   | .....                | .....                |
| France.....                           | 111,496              | 98,281               | 782,104              | 8,625                | 1,283,388            | 72,519               | 601,072              | 80,816               |
| Germany.....                          | 559,752              | 19,525               | .....                | .....                | .....                | .....                | 894,375              | 4,466                |
| Italy.....                            | 104,619              | 15,708               | 491,881              | 2,781                | 525,523              | 5,374                | 174,708              | 8,507                |
| Netherlands.....                      | 359,804              | 497,402              | 1,039                | 41,046               | 170,414              | 218,686              | 161,359              | 292,694              |
| Norway.....                           | 42,416               | 3,865                | 27,654               | 9                    | 90,065               | 7,346                | 64,349               | 1,449                |
| Spain.....                            | 37,974               | 3,200                | 12,607               | 2,905                | 19,021               | 5,853                | 28,328               | 2,776                |
| Sweden.....                           | 24,215               | 39,768               | 19,880               | 502                  | 129,821              | 15,496               | 62,969               | 24,411               |
| Switzerland.....                      | 60,174               | 3,169                | 26,989               | 2,676                | 47,125               | 6,933                | 49,806               | 5,327                |
| United Kingdom.....                   | 2,843,905            | 117,226              | 3,300,554            | 13,588               | 3,057,420            | 99,391               | 2,854,599            | 98,296               |
| Other countries.....                  | 170,686              | 57,611               | 131,883              | 71,916               | 101,865              | 33,637               | 63,558               | 31,806               |
| <b>All countries:</b>                 |                      |                      |                      |                      |                      |                      |                      |                      |
| Beef.....                             | 2,044,172            | 2,162,336            | 1,955,647            | 3,052,768            | 2,104,885            | 2,877,386            | 2,186,659            | 1,288,078            |
| Mutton.....                           | 611,744              | 560,284              | 274,008              | 318,807              | 559,334              | 732,932              | 874,361              | 450,708              |
| Pork.....                             | 1,632,882            | 1,638,145            | 2,064,995            | 2,480,771            | 2,288,400            | 3,159,926            | 1,833,352            | 1,891,039            |
| Other.....                            | 702,072              | 663,891              | 718,928              | 983,637              | 991,568              | 895,241              | 636,857              | 371,342              |
| <b>Total.....</b>                     | <b>4,990,870</b>     | <b>5,024,656</b>     | <b>5,018,578</b>     | <b>6,845,983</b>     | <b>5,954,187</b>     | <b>7,665,485</b>     | <b>5,591,199</b>     | <b>4,007,762</b>     |

\* Reported only for 1911.

\* Less than 500 pounds.

UNITED STATES MEAT PRODUCTION, IMPORTS, EXPORTS, AND CONSUMPTION.

TABLE 293.—Meat production, imports, exports, and consumption, 1900–1921.

Production of dressed-weight meat in calendar years estimated by the Bureau of Crop Estimates for 1900, ascertained by the Bureau of the Census for 1909, estimated by the Bureau of Animal Industry for 1916–1919; edible offal estimated by the Bureau of Crop Estimates for all years from these percentages of dressed weights: Beef, 19.047 per cent; veal, 7.455 per cent; mutton, including lamb, 4.65 per cent; pork, including lard, 15.66 per cent. Some of the foreign trade numbers are approximate averages, and the small numbers of meat animals in this trade are not included. Beef statistics include veal; mutton includes lamb and goat; pork includes lard.

| Class of meat.   | 1900       | 1909       | 1916       | 1917       | 1918       | 1919       | 1920       | 1921       |
|--|------------|------------|------------|------------|------------|------------|------------|------------|
| Production, dressed weight, and edible offal, in thousand pounds.  |            |            |            |            |            |            |            |            |
| Beef.....  | 8,962,805  | 9,545,343  | 7,859,854  | 8,670,651  | 9,563,895  | 8,403,598  | 8,699,924  | 8,302,148  |
| Mutton.....  | 616,385    | 646,277    | 663,724    | 513,997    | 526,973    | 639,710    | 567,233    | 655,936    |
| Pork.....  | 9,286,245  | 9,532,453  | 12,268,010 | 9,805,989  | 12,571,909 | 12,748,350 | 11,814,791 | 12,225,737 |
| Total....  | 18,865,435 | 19,724,073 | 20,791,588 | 18,990,637 | 22,662,777 | 21,791,658 | 21,081,948 | 21,183,821 |
| Imports, in thousand pounds.                                       |            |            |            |            |            |            |            |            |
| Beef.....  | 2,500      | 4,500      | 40,425     | 27,639     | 30,296     | 89,991     | 90,492     | 51,666     |
| Mutton.....  |            |            | 17,235     | 5,624      | 608        | 8,209      | 101,168    | 25,395     |
| Pork.....  |            | 500        | 1,171      | 2,822      | 3,586      | 9,545      | 5,015      | 2,705      |
| Total....  | 2,500      | 5,000      | 58,831     | 36,085     | 34,490     | 107,745    | 196,675    | 79,766     |
| Domestic exports, in thousand pounds.                              |            |            |            |            |            |            |            |            |
| Beef.....  | 857,542    | 499,828    | 395,535    | 408,611    | 796,897    | 441,323    | 279,043    | 228,969    |
| Mutton.....  | 600        | 1,600      | 5,258      | 2,882      | 1,631      | 3,009      | 3,575      | 7,515      |
| Pork.....  | 1,602,662  | 1,003,223  | 1,469,363  | 1,319,128  | 2,263,345  | 2,674,395  | 1,569,073  | 1,661,558  |
| Total....  | 2,460,804  | 1,504,651  | 1,870,156  | 1,730,601  | 3,061,873  | 3,118,727  | 1,851,691  | 1,898,042  |
| Consumption, dressed weight, and edible offal, in thousand pounds. |            |            |            |            |            |            |            |            |
| Beef.....  | 8,107,763  | 9,050,015  | 7,504,744  | 8,289,679  | 8,797,294  | 8,052,266  | 8,511,373  | 8,124,846  |
| Mutton.....  | 615,785    | 644,677    | 675,701    | 516,759    | 525,950    | 644,910    | 664,826    | 673,815    |
| Pork.....  | 7,683,683  | 8,529,780  | 10,799,818 | 8,489,683  | 10,312,150 | 10,083,300 | 10,250,733 | 10,566,884 |
| Total....  | 16,407,131 | 18,224,422 | 18,980,263 | 17,296,121 | 19,635,394 | 18,780,676 | 19,426,932 | 19,365,545 |
| Per capita consumption, in pounds.                                 |            |            |            |            |            |            |            |            |
| Beef.....  | 106.7      | 99.9       | 74.6       | 85.5       | 85.5       | 77.2       | 80.5       | 75.8       |
| Mutton.....  | 8.1        | 7.1        | 6.7        | 5.1        | 5.1        | 6.2        | 6.3        | 6.3        |
| Pork.....  | 101.1      | 94.2       | 107.3      | 83.2       | 100.2      | 96.7       | 97.0       | 98.6       |
| Total....  | 215.9      | 201.2      | 188.6      | 169.5      | 190.9      | 180.1      | 183.8      | 180.8      |



## HORSES AND MULES.

TABLE 294.—*Horses and mules: Number and value on farms in the United States, January 1, 1870-1922.*

NOTE.—Figures in *italics* are census returns; figures in *roman* are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910, giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—i. e., 000 omitted.]

| Year.              | Horses. |                    | Mules.  |                    |
|--------------------|---------|--------------------|---------|--------------------|
|                    | Number. | Farm value Jan. 1. | Number. | Farm value Jan. 1. |
| 1870, June 1.....  | 7,145   | \$481,719          | 1,125   | \$101,431          |
| 1880, June 1.....  | 10,357  | 569,916            | 1,813   | 112,749            |
| 1890, June 1.....  | 14,969  | 1,061,182          | 2,296   | 179,176            |
| 1900, June 1.....  | 18,267  | 797,907            | 3,265   | 167,855            |
| 1910, Apr. 15..... | 18,853  | 2,142,324          | 4,210   | 508,049            |
| 1911.....          | 20,277  | 2,259,981          | 4,323   | 544,359            |
| 1912.....          | 20,509  | 2,172,694          | 4,362   | 535,657            |
| 1913.....          | 20,587  | 2,278,222          | 4,386   | 545,245            |
| 1914.....          | 20,982  | 2,291,638          | 4,449   | 551,017            |
| 1915.....          | 21,195  | 2,190,102          | 4,479   | 503,271            |
| 1916.....          | 21,159  | 2,149,736          | 4,593   | 522,834            |
| 1917.....          | 21,210  | 2,182,307          | 4,723   | 558,006            |
| 1918.....          | 21,555  | 2,246,970          | 4,873   | 627,879            |
| 1919.....          | 21,432  | 2,114,897          | 4,954   | 672,922            |
| 1920.....          | 19,766  | 1,907,646          | 5,427   | 805,495            |
| 1921.....          | 19,208  | 1,619,423          | 5,455   | 636,568            |
| 1922.....          | 19,099  | 1,346,154          | 5,436   | 479,806            |

TABLE 295.—*Horses and mules: Farm price per head, January 1, 1867-1922.*

| Year.    | Horses. | Mules.  | Year.    | Horses. | Mules.  | Year.    | Horses. | Mules.  | Year.    | Horses. | Mules.   |
|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|----------|
| 1867.... | \$50.05 | \$66.94 | 1881.... | \$58.44 | \$69.79 | 1895.... | \$36.29 | \$47.55 | 1909.... | \$35.64 | \$107.84 |
| 1868.... | 54.27   | 56.04   | 1882.... | 53.53   | 71.35   | 1896.... | 33.07   | 45.29   | 1910.... | 108.03  | 120.20   |
| 1869.... | 62.57   | 79.23   | 1883.... | 70.59   | 79.49   | 1897.... | 31.51   | 41.06   | 1911.... | 111.46  | 125.92   |
| 1870.... | 67.42   | 90.16   | 1884.... | 74.64   | 84.22   | 1898.... | 34.26   | 43.88   | 1912.... | 105.94  | 120.51   |
| 1871.... | 71.14   | 91.98   | 1885.... | 73.70   | 82.38   | 1899.... | 37.40   | 44.96   | 1913.... | 110.77  | 124.31   |
| 1872.... | 67.41   | 87.14   | 1886.... | 71.27   | 79.60   | 1900.... | 43.63   | 51.41   | 1914.... | 109.32  | 123.85   |
| 1873.... | 66.39   | 85.15   | 1887.... | 72.15   | 78.91   | 1901.... | 52.86   | 63.97   | 1915.... | 103.33  | 112.36   |
| 1874.... | 65.15   | 81.35   | 1888.... | 71.82   | 79.78   | 1902.... | 58.61   | 67.61   | 1916.... | 101.60  | 113.83   |
| 1875.... | 61.10   | 71.89   | 1889.... | 71.89   | 79.49   | 1903.... | 62.25   | 72.49   | 1917.... | 102.39  | 118.15   |
| 1876.... | 57.29   | 66.46   | 1890.... | 70.23   | 78.04   | 1904.... | 67.93   | 78.88   | 1918.... | 104.24  | 128.81   |
| 1877.... | 55.83   | 64.07   | 1891.... | 67.00   | 77.88   | 1905.... | 70.37   | 87.18   | 1919.... | 98.45   | 135.83   |
| 1878.... | 56.63   | 62.03   | 1892.... | 65.01   | 75.55   | 1906.... | 80.72   | 98.31   | 1920.... | 96.51   | 148.42   |
| 1879.... | 52.36   | 56.00   | 1893.... | 61.22   | 70.68   | 1907.... | 98.51   | 112.16  | 1921.... | 84.31   | 116.09   |
| 1880.... | 54.16   | 62.19   | 1894.... | 47.83   | 62.17   | 1908.... | 93.41   | 107.76  | 1922.... | 70.48   | 83.26    |

HORSES AND MULES—Continued.

TABLE 296.—Horses and mules: Number and value on farms, January 1, 1921 and 1922, by States.

| State.              | Horses.            |        |                        |          |                                   |           | Mules.             |       |                        |          |                                   |         |
|---------------------|--------------------|--------|------------------------|----------|-----------------------------------|-----------|--------------------|-------|------------------------|----------|-----------------------------------|---------|
|                     | Number (thousands) |        | Average price per head |          | Farm value (thousands of dollars) |           | Number (thousands) |       | Average price per head |          | Farm value (thousands of dollars) |         |
|                     | 1921               | 1922   | 1921                   | 1922     | 1921                              | 1922      | 1921               | 1922  | 1921                   | 1922     | 1921                              | 1922    |
| Maine.....          | 93                 | 92     | \$147.00               | \$125.00 | \$13,671                          | \$11,500  |                    |       |                        |          |                                   |         |
| New Hampshire.....  | 37                 | 36     | 132.00                 | 114.00   | 4,864                             | 4,104     |                    |       |                        |          |                                   |         |
| Vermont.....        | 77                 | 77     | 124.00                 | 110.00   | 9,548                             | 8,470     |                    |       |                        |          |                                   |         |
| Massachusetts.....  | 49                 | 45     | 151.00                 | 135.00   | 7,399                             | 6,450     |                    |       |                        |          |                                   |         |
| Rhode Island.....   | 6                  | 6      | 148.00                 | 138.00   | 888                               | 828       |                    |       |                        |          |                                   |         |
| Connecticut.....    | 37                 | 37     | 148.00                 | 135.00   | 5,478                             | 4,995     |                    |       |                        |          |                                   |         |
| New York.....       | 525                | 520    | 129.00                 | 117.00   | 67,725                            | 60,840    | 7                  | 7     | \$137.00               | \$133.00 | \$939                             | \$831   |
| New Jersey.....     | 72                 | 72     | 144.00                 | 133.00   | 10,368                            | 9,373     | 6                  | 6     | 161.00                 | 151.00   | 966                               | 903     |
| Pennsylvania.....   | 496                | 498    | 121.00                 | 112.00   | 60,016                            | 55,552    | 54                 | 53    | 141.00                 | 124.00   | 7,614                             | 6,572   |
| Delaware.....       | 27                 | 26     | 81.00                  | 66.00    | 2,187                             | 1,716     | 9                  | 9     | 112.00                 | 88.00    | 1,008                             | 792     |
| Maryland.....       | 136                | 137    | 91.00                  | 87.00    | 13,324                            | 11,919    | 23                 | 23    | 125.00                 | 115.00   | 4,125                             | 3,795   |
| Virginia.....       | 306                | 300    | 101.00                 | 84.00    | 30,906                            | 25,200    | 97                 | 96    | 129.00                 | 105.00   | 12,513                            | 10,080  |
| West Virginia.....  | 164                | 161    | 103.00                 | 89.00    | 16,892                            | 14,399    | 15                 | 15    | 116.00                 | 97.00    | 1,740                             | 1,455   |
| North Carolina..... | 186                | 186    | 124.00                 | 106.00   | 20,750                            | 17,928    | 260                | 257   | 156.00                 | 129.00   | 40,560                            | 33,133  |
| South Carolina..... | 77                 | 76     | 134.00                 | 88.00    | 10,318                            | 6,686     | 229                | 218   | 188.00                 | 129.00   | 41,360                            | 28,122  |
| Georgia.....        | 101                | 101    | 112.00                 | 76.00    | 11,312                            | 7,676     | 406                | 394   | 153.00                 | 99.00    | 62,118                            | 39,066  |
| Florida.....        | 38                 | 39     | 123.00                 | 115.00   | 4,674                             | 4,376     | 42                 | 42    | 167.00                 | 148.00   | 7,014                             | 6,216   |
| Ohio.....           | 795                | 787    | 108.00                 | 96.00    | 85,860                            | 77,912    | 32                 | 31    | 112.00                 | 100.00   | 3,584                             | 3,460   |
| Indiana.....        | 703                | 703    | 95.00                  | 81.00    | 66,785                            | 56,943    | 101                | 101   | 109.00                 | 84.00    | 11,009                            | 8,454   |
| Illinois.....       | 1,232              | 1,207  | 85.00                  | 69.00    | 104,720                           | 83,282    | 186                | 161   | 97.00                  | 75.00    | 16,102                            | 12,075  |
| Michigan.....       | 600                | 594    | 97.00                  | 94.00    | 58,200                            | 55,836    | 6                  | 6     | 101.00                 | 93.00    | 606                               | 568     |
| Wisconsin.....      | 623                | 636    | 108.00                 | 93.00    | 71,804                            | 61,006    | 4                  | 4     | 103.00                 | 98.00    | 412                               | 392     |
| Minnesota.....      | 914                | 905    | 88.00                  | 76.00    | 78,604                            | 68,730    | 10                 | 10    | 93.00                  | 79.00    | 930                               | 790     |
| Iowa.....           | 1,318              | 1,278  | 85.00                  | 73.00    | 112,686                           | 93,284    | 81                 | 79    | 101.00                 | 78.00    | 8,181                             | 6,362   |
| Missouri.....       | 897                | 879    | 73.00                  | 52.00    | 65,481                            | 45,708    | 377                | 377   | 94.00                  | 65.00    | 35,438                            | 24,605  |
| North Dakota.....   | 630                | 613    | 63.00                  | 55.00    | 52,290                            | 44,715    | 8                  | 8     | 82.00                  | 72.00    | 656                               | 576     |
| South Dakota.....   | 784                | 784    | 62.00                  | 49.00    | 48,608                            | 38,416    | 14                 | 14    | 51.00                  | 70.00    | 1,124                             | 969     |
| Nebraska.....       | 923                | 932    | 71.00                  | 56.00    | 65,533                            | 52,192    | 106                | 106   | 59.00                  | 70.00    | 6,494                             | 7,420   |
| Kansas.....         | 1,040              | 1,040  | 66.00                  | 48.00    | 68,640                            | 49,900    | 279                | 282   | 88.00                  | 59.00    | 24,532                            | 16,636  |
| Kentucky.....       | 374                | 374    | 87.00                  | 68.00    | 32,538                            | 25,432    | 293                | 293   | 111.00                 | 82.00    | 32,523                            | 24,026  |
| Tennessee.....      | 312                | 315    | 98.00                  | 75.00    | 29,016                            | 23,625    | 349                | 346   | 110.00                 | 86.00    | 38,390                            | 29,736  |
| Alabama.....        | 180                | 180    | 90.00                  | 76.00    | 11,700                            | 9,580     | 302                | 299   | 113.00                 | 91.00    | 34,126                            | 28,106  |
| Mississippi.....    | 211                | 211    | 88.00                  | 70.00    | 18,568                            | 14,770    | 299                | 296   | 121.00                 | 92.00    | 36,179                            | 27,232  |
| Louisiana.....      | 175                | 173    | 85.00                  | 77.00    | 14,875                            | 13,321    | 160                | 178   | 143.00                 | 118.00   | 25,740                            | 21,094  |
| Texas.....          | 981                | 991    | 77.00                  | 58.00    | 75,537                            | 57,478    | 854                | 863   | 110.00                 | 85.00    | 93,940                            | 73,355  |
| Oklahoma.....       | 694                | 708    | 63.00                  | 45.00    | 43,722                            | 31,860    | 334                | 337   | 89.00                  | 65.00    | 29,726                            | 21,905  |
| Arkansas.....       | 245                | 247    | 78.00                  | 67.00    | 18,620                            | 14,079    | 325                | 328   | 107.00                 | 79.00    | 34,775                            | 25,912  |
| Montana.....        | 669                | 663    | 50.00                  | 41.00    | 33,456                            | 27,929    | 9                  | 9     | 87.00                  | 69.00    | 783                               | 621     |
| Wyoming.....        | 182                | 191    | 45.00                  | 39.00    | 8,372                             | 7,449     | 3                  | 3     | 77.00                  | 61.00    | 231                               | 153     |
| Colorado.....       | 417                | 421    | 62.00                  | 54.00    | 25,854                            | 22,734    | 32                 | 32    | 90.00                  | 69.00    | 2,880                             | 2,208   |
| New Mexico.....     | 177                | 177    | 59.00                  | 50.00    | 10,443                            | 8,850     | 21                 | 21    | 88.00                  | 72.00    | 1,845                             | 1,512   |
| Arizona.....        | 136                | 135    | 88.00                  | 68.00    | 11,908                            | 9,169     | 12                 | 12    | 131.00                 | 89.00    | 1,572                             | 1,068   |
| Utah.....           | 127                | 128    | 73.00                  | 70.00    | 9,306                             | 8,900     | 3                  | 3     | 72.00                  | 66.00    | 216                               | 196     |
| Nevada.....         | 48                 | 48     | 58.00                  | 47.00    | 2,784                             | 2,266     | 2                  | 2     | 66.00                  | 53.00    | 132                               | 106     |
| Idaho.....          | 284                | 281    | 70.00                  | 63.00    | 19,880                            | 17,703    | 8                  | 8     | 51.00                  | 73.00    | 648                               | 584     |
| Washington.....     | 287                | 281    | 83.00                  | 70.00    | 23,534                            | 19,670    | 22                 | 22    | 97.00                  | 83.00    | 2,134                             | 1,936   |
| Oregon.....         | 269                | 272    | 83.00                  | 76.00    | 22,327                            | 20,672    | 14                 | 14    | 95.00                  | 81.00    | 1,330                             | 1,134   |
| California.....     | 382                | 367    | 88.00                  | 82.00    | 37,496                            | 30,064    | 60                 | 61    | 123.00                 | 102.00   | 7,380                             | 6,222   |
| United States..     | 19,208             | 19,099 | 84.81                  | 70.48    | 1,619,422                         | 1,346,154 | 5,455              | 5,436 | 116.69                 | 88.26    | 536,568                           | 479,806 |

## HORSES AND MULES—Continued.

TABLE 297.—Wholesale price of horses and mules at St. Louis and Chicago, 1921-1902.

| Year and month.<br>* | St. Louis.                    |          |                         |          | Average price per head for horses on the Chicago market 1902-1921. |                               |  |                            |                           |                   |
|----------------------|-------------------------------|----------|-------------------------|----------|--|-------------------------------|--|----------------------------|---------------------------|-------------------|
|                      | Horses, good to choice draft. |          | Mules, 16 to 16½ hands. |          | Draft-ers, heavy.  | Car-riage teams. <sup>1</sup> | Draft-ers, <sup>2</sup> plain to medium. | Wagon <sup>3</sup> horses. | Farm <sup>4</sup> chunks. | South-ern chunks. |
|                      | Low.                          | High.    | Low.                    | High.    |  |                               |  |                            |                           |                   |
| 1921.                |                               |          |                         |          |  |                               |  |                            |                           |                   |
| January.....         | \$125.00                      | \$215.00 | \$125.00                | \$280.00 | \$209.00   | .....                         | \$130.00                                 | \$138.00                   | \$92.00                   | .....             |
| February.....        | 125.00                        | 225.00   | 125.00                  | 280.00   | 207.00   | .....                         | 125.00                                   | 144.00                     | 114.00                    | .....             |
| March.....           | 125.00                        | 215.00   | 125.00                  | 275.00   | 208.00   | .....                         | 122.00                                   | 155.00                     | 119.00                    | .....             |
| April.....           | 125.00                        | 220.00   | 130.00                  | 275.00   | 212.00   | .....                         | 135.00                                   | 169.00                     | 138.00                    | .....             |
| May.....             | 175.00                        | 220.00   | 130.00                  | 275.00   | 208.00   | .....                         | 124.00                                   | 163.00                     | 130.00                    | .....             |
| June.....            | 155.00                        | 190.00   | 130.00                  | 275.00   | .....  | .....                         | 128.00                                   | .....                      | .....                     | .....             |
| July.....            | 155.00                        | 185.00   | 130.00                  | 275.00   | 200.00   | .....                         | 127.00                                   | 150.00                     | 105.00                    | .....             |
| August.....          | 155.00                        | 185.00   | 130.00                  | 250.00   | 188.00   | .....                         | 128.00                                   | 150.00                     | 105.00                    | .....             |
| September.....       | 125.00                        | 185.00   | 130.00                  | 250.00   | 188.00   | .....                         | 128.00                                   | 150.00                     | 105.00                    | .....             |
| October.....         | 125.00                        | 180.00   | 155.00                  | 250.00   | 181.00   | .....                         | 128.00                                   | 150.00                     | 105.00                    | .....             |
| November.....        | 140.00                        | 200.00   | 150.00                  | 210.00   | 200.00   | .....                         | 142.00                                   | 155.00                     | 118.00                    | .....             |
| December.....        | 140.00                        | 160.00   | 150.00                  | 200.00   | 202.00   | .....                         | 132.00                                   | 162.00                     | 126.00                    | .....             |
|                      | 125.00                        | 225.00   | 125.00                  | 280.00   | 200.00   | .....                         | 127.00                                   | 153.00                     | 114.00                    | .....             |
| 1920.....            | 110.00                        | 275.00   | 140.00                  | 400.00   | 242.00   | \$167.00                      | 154.00                                   | 154.00                     | 104.00                    | \$88.00           |
| 1919.....            | 140.00                        | 325.00   | 150.00                  | 400.00   | 230.00   | 167.00                        | .....                                    | 116.00                     | 121.00                    | 73.00             |
| 1918.....            | 190.00                        | 242.00   | 201.00                  | 307.00   | 220.00   | .....                         | .....                                    | .....                      | .....                     | .....             |
| 1917.....            | 165.00                        | 245.00   | 172.00                  | 272.00   | 212.00   | 470.00                        | 162.00                                   | 148.00                     | 170.00                    | 93.00             |
| 1916.....            | 150.00                        | 225.00   | 135.00                  | 275.00   | 252.00   | .....                         | 166.00                                   | 160.00                     | 167.00                    | 109.00            |
| 1915.....            | 160.00                        | 225.00   | 120.00                  | 275.00   | 205.00   | 473.00                        | 164.00                                   | 155.00                     | 166.00                    | 88.00             |
| 1914.....            | 175.00                        | 220.00   | 120.00                  | 250.00   | 208.00   | 483.00                        | 169.00                                   | 160.00                     | 171.00                    | 93.00             |
| 1913.....            | 200.00                        | 250.00   | 160.00                  | 290.00   | 213.00   | 498.00                        | 174.00                                   | 165.00                     | 176.00                    | 98.00             |
| 1912.....            | 165.00                        | 240.00   | 160.00                  | 285.00   | 210.00   | 473.00                        | 177.00                                   | 160.00                     | 175.00                    | 97.00             |
| 1911.....            | 165.00                        | 235.00   | 150.00                  | 275.00   | 205.00   | 483.00                        | 182.00                                   | 155.00                     | 170.00                    | 92.00             |
| 1910.....            | 165.00                        | 240.00   | 150.00                  | 275.00   | 200.00   | 473.00                        | 172.00                                   | 144.00                     | 161.00                    | 87.00             |
| 1909.....            | 140.00                        | 225.00   | 130.00                  | 235.00   | 194.00   | 482.00                        | 165.00                                   | 137.00                     | 152.00                    | 77.00             |
| 1908.....            | 175.00                        | 250.00   | 125.00                  | 200.00   | 180.00   | 450.00                        | 156.00                                   | 129.00                     | 138.00                    | 69.00             |
| 1907.....            | 175.00                        | 225.00   | 125.00                  | 250.00   | 194.00   | 482.00                        | 165.00                                   | 137.00                     | 152.00                    | 77.50             |
| 1906.....            | 175.00                        | 225.00   | 125.00                  | 215.00   | 188.00   | 486.00                        | 158.00                                   | 154.00                     | 147.00                    | 72.50             |
| 1905.....            | 175.00                        | 225.00   | 120.00                  | 210.00   | 186.00   | 486.00                        | 156.00                                   | 132.00                     | 145.00                    | 70.00             |
| 1904.....            | 175.00                        | 200.00   | 135.00                  | 200.00   | 177.00   | 475.00                        | 150.00                                   | 140.00                     | 140.00                    | 64.00             |
| 1903.....            | 160.00                        | 185.00   | 120.00                  | 175.00   | 171.00   | 455.00                        | 150.00                                   | 122.00                     | 140.00                    | 62.00             |
| 1902.....            | 160.00                        | 185.00   | 120.00                  | 160.00   | 166.00   | 450.00                        | 145.00                                   | 117.00                     | 135.00                    | 57.00             |

<sup>1</sup> Expressers, 1902-1919.<sup>2</sup> Drivers, 1902-1919.<sup>3</sup> General, 1902-1919.<sup>4</sup> Bussers and trammers, 1902-1919.

TABLE 298.—Horses: Farm price per head, 15th of each month, 1910-1921.

| Year.     | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1910..... | \$140 | \$147 | \$150 | \$154 | \$148 | \$151 | \$148 | \$148 | \$145 | \$144 | \$143 | \$141 |
| 1911..... | 143   | 144   | 145   | 147   | 146   | 145   | 139   | 141   | 139   | 137   | 136   | 134   |
| 1912..... | 134   | 137   | 140   | 142   | 144   | 145   | 142   | 142   | 141   | 140   | 139   | 139   |
| 1913..... | 140   | 146   | 146   | 148   | 145   | 146   | 143   | 141   | 141   | 138   | 136   | 135   |
| 1914..... | 137   | 139   | 138   | 138   | 139   | 136   | 137   | 135   | 132   | 131   | 130   | 130   |
| 1915..... | 130   | 132   | 132   | 132   | 133   | 132   | 134   | 131   | 131   | 129   | 127   | 126   |
| 1916..... | 128   | 129   | 131   | 133   | 134   | 132   | 133   | 131   | 131   | 130   | 129   | 129   |
| 1917..... | 129   | 131   | 133   | 136   | 138   | 137   | 135   | 132   | 132   | 130   | 129   | 129   |
| 1918..... | 130   | 133   | 137   | 137   | 136   | 135   | 132   | 131   | 128   | 126   | 122   | 121   |
| 1919..... | 120   | 121   | 124   | 127   | 129   | 127   | 127   | 125   | 119   | 114   | 113   | 113   |
| 1920..... | 118   | 123   | 127   | 131   | 132   | 130   | 127   | 124   | 119   | 112   | 103   | 97    |
| 1921..... | 96    | 98    | 101   | 100   | 98    | 98    | 94    | 98    | 89    | 85    | 82    | 81    |

HORSES AND MULES—Continued.

TABLE 299.—Horses and mules: Yearly receipts at principal markets, and at all markets, 1900 to 1921.

[In thousands—i. e., 630 omitted.]

| Year.          | Receipts at principal and other markets. <sup>1</sup> |              |                  |                  |                 |                  |                  |                  |                  |        |                    |
|----------------|---|--------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|--------|--------------------|
|                | Chicago.  | Kansas City. | Omaha.           | St. Paul.        | East St. Louis. | Fort Worth.      | Denver.          | Sioux City.      | St. Joseph.      | Total. | All other markets. |
| 1900.....      | 99  | 103          | 60               | 27               | 145             | ( <sup>2</sup> ) | 23               | 31               | 13               | 501    | .....              |
| 1901.....      | 109   | 97           | 36               | 15               | 129             | ( <sup>2</sup> ) | 17               | 18               | 23               | 444    | .....              |
| 1902.....      | 102   | 77           | 42               | 8                | 109             | 5                | 24               | 19               | 27               | 406    | .....              |
| 1903.....      | 101   | 67           | 53               | 8                | 129             | 10               | 19               | 12               | 20               | 419    | .....              |
| 1904.....      | 106   | 68           | 47               | 6                | 151             | 18               | 13               | 4                | 29               | 472    | .....              |
| 1905.....      | 127   | 66           | 45               | 6                | 178             | 18               | 16               | 15               | 32               | 503    | .....              |
| 1906.....      | 127   | 70           | 42               | 9                | 166             | 21               | 17               | 19               | 25               | 499    | .....              |
| 1907.....      | 102   | 62           | 44               | 15               | 117             | 19               | 11               | 16               | 27               | 413    | .....              |
| 1908.....      | 92  | 56           | 40               | 7                | 109             | 12               | 11               | 13               | 23               | 363    | .....              |
| 1909.....      | 91  | 68           | 32               | 6                | 112             | 21               | 15               | 15               | 23               | 383    | .....              |
| 1910.....      | 83  | 70           | 30               | 5                | 130             | 34               | 16               | 16               | 25               | 412    | .....              |
| 1911.....      | 105   | 85           | 32               | 8                | 171             | 37               | 18               | 17               | 42               | 515    | .....              |
| 1912.....      | 93  | 73           | 33               | 5                | 164             | 49               | 15               | 10               | 39               | 451    | .....              |
| 1913.....      | 91  | 82           | 32               | 5                | 157             | 57               | 16               | 10               | 32               | 482    | .....              |
| 1914.....      | 106   | 87           | 31               | 6                | 143             | 43               | 17               | 10               | 25               | 478    | .....              |
| 1915.....      | 165   | 102          | 42               | 10               | 271             | 55               | 72               | 22               | 41               | 750    | 327                |
| 1916.....      | 205   | 123          | 27               | 12               | 267             | 79               | 53               | 17               | 27               | 810    | 663                |
| 1917.....      | 107   | 123          | 33               | 10               | 230             | 115              | 20               | 29               | 34               | 756    | 720                |
| 1918.....      | 88  | 85           | 22               | 7                | 242             | 79               | 15               | 23               | 39               | 600    | 616                |
| 1919.....      | 46  | 83           | 25               | 11               | 250             | 60               | 23               | 16               | 43               | 557    | 510                |
| 1920.....      | 43  | 72           | 19               | 10               | 141             | 45               | 18               | 23               | 30               | 401    | 324                |
| 1921.....      | 34  | 30           | 7                | 5                | 68              | 13               | 10               | 7                | 12               | 186    | 131                |
| 1921.          |   |              |                  |                  |                 |                  |                  |                  |                  |        |                    |
| January.....   | 4   | 3            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 8               | 3                | 1                | 1                | 1                | 21     | 14                 |
| February.....  | 4   | 3            | 1                | 1                | 10              | 1                | 1                | 2                | 2                | 25     | 16                 |
| March.....     | 6   | 4            | 1                | 1                | 8               | 1                | 1                | 1                | 2                | 25     | 19                 |
| April.....     | 4   | 2            | 1                | ( <sup>3</sup> ) | 4               | ( <sup>3</sup> ) | 1                | 1                | 1                | 14     | 11                 |
| May.....       | 3   | 2            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 4               | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 10     | 8                  |
| June.....      | 2   | 1            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 2               | ( <sup>3</sup> ) | 1                | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 7      | 7                  |
| July.....      | 1   | 1            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 2               | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 6      | 5                  |
| August.....    | 1   | 1            | 1                | ( <sup>3</sup> ) | 5               | ( <sup>3</sup> ) | 1                | ( <sup>3</sup> ) | 1                | 10     | 7                  |
| September..... | 2   | 2            | 1                | ( <sup>3</sup> ) | 6               | 1                | 1                | 1                | 1                | 15     | 7                  |
| October.....   | 2   | 4            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 3               | 3                | 1                | 1                | 2                | 22     | 14                 |
| November.....  | 2   | 4            | 1                | ( <sup>3</sup> ) | 6               | 2                | 1                | ( <sup>3</sup> ) | 1                | 17     | 12                 |
| December.....  | 3   | 3            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 5               | 2                | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 1                | 14     | 11                 |

<sup>1</sup> Prior to 1915 receipts compiled from yearbooks of stockyard companies.

<sup>2</sup> Figures prior to 1915 not available.

<sup>3</sup> Not in operation.

<sup>4</sup> Less than 500.

## HORSES AND MULES—Continued.

TABLE 300.—Horses and mules: Yearly receipts at public stockyards, 1916-1921.

[In thousands—i. e., 000 omitted.]

| Stockyards.           | 1916             | 1917             | 1918             | 1919             | 1920             | 1921             |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Albany, N. Y.         | 6                | 3                |                  |                  |                  |                  |
| Amarillo, Tex.        | 14               | 13               | 15               | 15               | 13               | 2                |
| Atlanta, Ga.          |                  |                  | 78               | 60               | 26               | 3                |
| Augusta, Ga.          |                  | 23               | 33               | 22               | 7                | 1                |
| Baltimore, Md.        | 14               | 7                | 9                | 5                | 4                | 2                |
| Billings, Mont.       | ( <sup>1</sup> ) | 1                | 1                | 2                | 1                | ( <sup>1</sup> ) |
| Boston, Mass.         | 8                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |                  |
| Buffalo, N. Y.        | 56               | 17               | 10               | 19               | 22               | 24               |
| Cheyenne, Wyo.        |                  | 6                | 4                | 2                | 2                | 1                |
| Chicago, Ill.         | 205              | 107              | 88               | 46               | 43               | 34               |
| Cincinnati, Ohio.     | 20               | 27               | 19               | 19               | 14               | 6                |
| Cleveland, Ohio.      |                  | 9                | 4                | 5                | 6                | 2                |
| Columbia, S. C.       | 1                | 1                | 1                | 1                | 1                | ( <sup>1</sup> ) |
| Columbus, Ohio.       | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 2                | 1                | ( <sup>1</sup> ) |                  |
| Dayton, Ohio.         | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |                  |
| Denver, Colo.         | 53               | 20               | 15               | 23               | 18               | 10               |
| Detroit, Mich.        |                  | 14               | 4                | 2                | 3                | 1                |
| Dublin, Ga.           |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |
| East St. Louis, Ill.  | 267              | 280              | 242              | 250              | 141              | 68               |
| El Paso, Tex.         | 23               | 15               | 9                | 16               | 14               | 9                |
| Erie, Pa.             |                  |                  | 2                | 1                | 2                |                  |
| Evansville, Ind.      | 1                | 1                | 1                | 1                | 1                | ( <sup>1</sup> ) |
| Fort Worth, Tex.      | 79               | 115              | 79               | 60               | 45               | 13               |
| Indianapolis, Ind.    | 29               | 62               | 20               | 9                | 9                | 3                |
| Jacksonville, Fla.    | 1                | ( <sup>1</sup> ) |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |
| Jersey City, N. J.    | 155              | 70               | 42               | 11               | 3                | 2                |
| Kansas City, Mo.      | 123              | 128              | 85               | 83               | 72               | 30               |
| Knoxville, Tenn.      | 7                | 8                | 6                | 7                | 4                | 2                |
| Lancaster, Pa.        | 1                | 8                | 11               | 2                | 3                | 1                |
| Logansport, Ind.      | 1                |                  |                  |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Louisville, Ky.       | 5                | 14               | 17               | 11               | 9                | 1                |
| Marion, Ohio.         |                  |                  | ( <sup>1</sup> ) | 1                | 2                | 1                |
| Memphis, Tenn.        | 40               | 61               | 33               | 33               | 8                | 15               |
| Millwaukee, Wis.      | 2                | 2                | 2                | 2                | 2                | 1                |
| Montgomery, Ala.      |                  | 7                | 24               | 22               | 12               | 4                |
| Nashville, Tenn.      | 16               | 74               | 304              | 98               | 80               |                  |
| Nebraska City, Nebr.  |                  |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| New Brighton, Minn.   | 1                | 1                | 1                | 10               | 4                | ( <sup>1</sup> ) |
| New Orleans, La.      | 1                | 3                | 1                | ( <sup>1</sup> ) | 1                | ( <sup>1</sup> ) |
| New York, N. Y.       | 9                | 8                | ( <sup>1</sup> ) | 2                | 2                | 1                |
| Ogden, Utah.          |                  | 25               | 19               | 7                | 6                | 1                |
| Oklahoma, Okla.       | 47               | 62               | 13               | 10               | 6                | 2                |
| Omaha, Nebr.          | 27               | 33               | 22               | 25               | 19               | 7                |
| Pasco, Wash.          |                  |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Peoria, Ill.          | 1                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Philadelphia, Pa.     | 11               | 10               | 8                | 7                | 6                | 3                |
| Pittsburgh, Pa.       | 54               | 39               | 85               | 18               | 20               | 11               |
| Portland, Oreg.       | 3                | 7                | 2                | 2                | 2                | 1                |
| Pueblo, Colo.         | 8                | 7                | 4                | 4                | 4                | 1                |
| Richmond, Va.         | 18               | 25               | 24               | 25               | 16               | 10               |
| St. Joseph, Mo.       | 27               | 34               | 39               | 43               | 30               | 12               |
| St. Louis, Mo.        | 2                | 2                | 1                |                  |                  |                  |
| St. Paul, Minn.       | 12               | 10               | 7                | 11               | 10               | 5                |
| Salt Lake City, Utah. | 2                | 2                | 2                | 2                | 2                | 1                |
| San Antonio, Tex.     | 41               | 32               | 30               | 30               | 25               | 6                |
| Seattle, Wash.        | ( <sup>1</sup> ) |                  | ( <sup>1</sup> ) | 1                | 1                | ( <sup>1</sup> ) |
| Sioux City, Iowa.     | 17               | 29               | 23               | 16               | 23               | 7                |
| Sioux Falls, S. Dak.  |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Spokane, Wash.        | 7                | 7                | 5                | 3                | 2                | 1                |
| Tacoma, Wash.         | ( <sup>1</sup> ) |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |                  |
| Toledo, Ohio.         | 1                | 2                | 2                | 3                | 4                | 1                |
| Washington, D. C.     | ( <sup>1</sup> ) | 2                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Watertown, Mass.      | 45               | 22               | 7                | 2                |                  |                  |
| Wichita, Kans.        | 17               | 19               | 11               | 17               | 25               | 11               |
| Total.                | 1,478            | 1,476            | 1,216            | 1,067            | 725              | 317              |

<sup>1</sup> Less than 500.

HORSES AND MULES—Continued.

TABLE 301.—*Horses and mules: Monthly and yearly receipts at all public stock-yards, 1915-1921.*

[In thousands—i. e., 000 omitted.]

| Year.     | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|-----------|------|------|------|------|------|-------|-------|------|-------|------|------|------|--------|
| 1915..... | 97   | 95   | 95   | 88   | 98   | 103   | 94    | 74   | 85    | 110  | 97   | 70   | 1,107  |
| 1916..... | 118  | 105  | 111  | 84   | 120  | 104   | 162   | 135  | 139   | 153  | 129  | 115  | 1,473  |
| 1917..... | 148  | 95   | 117  | 93   | 68   | 63    | 88    | 55   | 129   | 236  | 223  | 163  | 1,479  |
| 1918..... | 161  | 149  | 138  | 44   | 36   | 45    | 54    | 84   | 123   | 162  | 145  | 76   | 1,216  |
| 1919..... | 115  | 87   | 71   | 53   | 37   | 43    | 33    | 92   | 148   | 130  | 146  | 93   | 1,063  |
| 1920..... | 146  | 112  | 87   | 48   | 43   | 34    | 38    | 75   | 62    | 40   | 23   | 17   | 725    |
| 1921..... | 35   | 41   | 44   | 25   | 18   | 14    | 11    | 17   | 22    | 36   | 29   | 25   | 317    |

TABLE 302.—*Horses and mules: Imports, exports, and prices, 1896-1921.*

| Year ending June 30— | Imports of horses. |           |                       | Exports of horses. |             |                       | Exports of mules. |            |                       |
|----------------------|--------------------|-----------|-----------------------|--------------------|-------------|-----------------------|-------------------|------------|-----------------------|
|                      | Number.            | Value.    | Average import price. | Number.            | Value.      | Average export price. | Number.           | Value.     | Average export price. |
| 1896.....            | 9,991              | \$682,591 | \$66.32               | 25,126             | \$3,530,703 | \$140.52              | 5,918             | \$406,161  | \$68.63               |
| 1897.....            | 6,998              | 464,808   | 66.42                 | 39,532             | 4,769,265   | 120.64                | 7,473             | 545,331    | 72.97                 |
| 1898.....            | 3,085              | 414,599   | 134.49                | 51,150             | 6,176,569   | 120.75                | 8,098             | 684,789    | 82.09                 |
| 1899.....            | 3,042              | 551,050   | 181.15                | 45,778             | 5,444,342   | 118.93                | 6,755             | 516,908    | 76.52                 |
| 1900.....            | 3,102              | 596,892   | 192.32                | 64,722             | 7,612,616   | 117.62                | 43,369            | 3,919,478  | 90.38                 |
| 1901.....            | 3,785              | 985,738   | 260.43                | 82,250             | 8,873,945   | 107.89                | 34,405            | 3,210,267  | 93.30                 |
| 1902.....            | 4,832              | 1,577,234 | 326.41                | 103,020            | 10,048,046  | 97.53                 | 27,556            | 2,692,298  | 97.61                 |
| 1903.....            | 4,999              | 1,536,296 | 307.32                | 34,007             | 3,152,159   | 92.69                 | 4,294             | 521,725    | 121.47                |
| 1904.....            | 4,736              | 1,480,287 | 308.99                | 42,001             | 3,189,100   | 75.93                 | 3,658             | 412,971    | 112.90                |
| 1905.....            | 5,180              | 1,591,083 | 307.16                | 34,822             | 3,175,259   | 91.19                 | 5,826             | 645,494    | 110.79                |
| 1906.....            | 6,021              | 1,716,675 | 285.11                | 40,087             | 4,365,981   | 108.91                | 7,167             | 999,639    | 138.08                |
| 1907.....            | 6,080              | 1,978,105 | 325.35                | 33,832             | 4,369,957   | 131.99                | 6,781             | 850,901    | 125.45                |
| 1908.....            | 5,487              | 1,604,392 | 292.40                | 19,000             | 2,612,587   | 137.50                | 6,609             | 960,667    | 144.90                |
| 1909.....            | 7,084              | 2,007,276 | 283.35                | 21,616             | 3,886,617   | 156.67                | 3,432             | 472,017    | 137.53                |
| 1910.....            | 11,620             | 3,296,022 | 283.65                | 28,910             | 4,061,157   | 141.17                | 4,512             | 614,094    | 136.13                |
| 1911.....            | 9,593              | 2,692,074 | 280.63                | 25,145             | 3,845,253   | 152.92                | 6,585             | 1,070,051  | 162.50                |
| 1912.....            | 6,607              | 1,923,025 | 291.06                | 34,828             | 4,784,815   | 136.81                | 4,901             | 752,095    | 149.30                |
| 1913.....            | 10,008             | 2,125,875 | 212.43                | 28,707             | 3,960,103   | 137.95                | 4,744             | 735,795    | 154.63                |
| 1914.....            | 33,019             | 2,605,029 | 78.89                 | 22,776             | 3,388,819   | 148.79                | 4,883             | 690,974    | 141.51                |
| 1915.....            | 12,632             | 977,380   | 77.25                 | 239,340            | 64,046,334  | 221.35                | 65,738            | 12,726,143 | 193.44                |
| 1916.....            | 15,556             | 1,618,245 | 104.03                | 357,553            | 78,531,145  | 205.65                | 111,915           | 22,946,312 | 205.03                |
| 1917.....            | 12,594             | 1,688,308 | 150.06                | 275,674            | 59,528,329  | 213.60                | 136,689           | 27,800,854 | 203.39                |
| 1918.....            | 5,111              | 1,187,443 | 232.33                | 94,765             | 14,923,663  | 176.06                | 26,879            | 4,885,406  | 169.17                |
| 1919.....            | 4,003              | 750,264   | 187.43                | 37,975             | 5,206,251   | 136.10                | 12,452            | 2,333,929  | 187.43                |
| 1920.....            | 4,906              | 799,012   | 162.86                | 15,962             | 3,285,066   | 173.34                | 8,991             | 1,815,883  | 201.97                |
| 1921.....            | 4,044              | 1,206,457 | 298.09                | 12,638             | 1,923,041   | 152.16                | 6,770             | 1,063,254  | 157.05                |

## CATTLE.

TABLE 303.—Cattle (live): Imports, exports, and prices, 1896-1921.

| Year ending June 30— | Imports. |             |                       | Exports. |              |                       |
|----------------------|----------|-------------|-----------------------|----------|--------------|-----------------------|
|                      | Number.  | Value.      | Average import price. | Number.  | Value.       | Average export price. |
| 1896.....            | 217,826  | \$1,509,886 | \$6.93                | 372,461  | \$34,560,672 | \$92.79               |
| 1897.....            | 328,977  | 2,589,857   | 7.87                  | 392,190  | 36,357,451   | 92.70                 |
| 1898.....            | 281,589  | 2,913,223   | 9.99                  | 439,255  | 37,827,500   | 86.12                 |
| 1899.....            | 199,752  | 2,320,362   | 11.62                 | 389,490  | 30,516,833   | 78.35                 |
| 1900.....            | 181,006  | 2,267,694   | 12.47                 | 397,286  | 30,635,153   | 77.11                 |
| 1901.....            | 146,022  | 1,981,433   | 13.23                 | 459,218  | 37,566,980   | 81.81                 |
| 1902.....            | 96,027   | 1,608,722   | 16.75                 | 392,884  | 28,902,212   | 78.11                 |
| 1903.....            | 66,175   | 1,161,548   | 17.55                 | 402,178  | 28,848,936   | 74.22                 |
| 1904.....            | 16,056   | 310,737     | 19.35                 | 593,409  | 42,256,291   | 71.21                 |
| 1905.....            | 27,855   | 458,572     | 16.46                 | 507,806  | 40,598,048   | 71.50                 |
| 1906.....            | 29,019   | 548,430     | 18.90                 | 584,299  | 42,081,170   | 72.03                 |
| 1907.....            | 32,402   | 568,122     | 17.44                 | 428,051  | 34,577,392   | 81.73                 |
| 1908.....            | 32,356   | 1,507,310   | 16.32                 | 349,210  | 28,339,134   | 84.02                 |
| 1909.....            | 139,154  | 1,999,422   | 14.37                 | 207,542  | 18,046,976   | 86.96                 |
| 1910.....            | 195,983  | 2,999,824   | 15.37                 | 139,430  | 12,200,154   | 87.50                 |
| 1911.....            | 182,923  | 2,953,077   | 16.14                 | 150,100  | 13,163,920   | 87.70                 |
| 1912.....            | 318,372  | 4,805,574   | 15.09                 | 105,608  | 8,870,075    | 84.07                 |
| 1913.....            | 421,649  | 6,640,668   | 15.75                 | 24,714   | 1,177,199    | 47.63                 |
| 1914.....            | 868,368  | 18,696,718  | 21.53                 | 18,378   | 647,288      | 35.22                 |
| 1915.....            | 538,187  | 17,513,175  | 32.54                 | 5,494    | 702,847      | 128.16                |
| 1916.....            | 480,185  | 15,187,593  | 34.58                 | 21,668   | 2,383,765    | 110.02                |
| 1917.....            | 374,826  | 13,021,259  | 34.74                 | 13,387   | 949,503      | 70.93                 |
| 1918.....            | 293,719  | 17,852,176  | 60.78                 | 18,213   | 1,247,800    | 68.51                 |
| 1919.....            | 440,399  | 36,995,921  | 84.01                 | 42,345   | 2,092,816    | 49.42                 |
| 1920.....            | 575,323  | 45,081,179  | 78.36                 | 83,039   | 11,921,518   | 143.57                |
| 1921.....            | 329,974  | 23,634,361  | 71.62                 | 145,673  | 10,950,507   | 75.17                 |

TABLE 304.—Cattle: Number and value on farms in the United States January 1, 1870-1922.

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910, giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—000 omitted.]

| Year.              | MILK COWS. |                    | OTHER CATTLE. |                    |
|--------------------|------------|--------------------|---------------|--------------------|
|                    | Number.    | Farm value Jan. 1. | Number.       | Farm value Jan. 1. |
| 1870, June 1.....  | 3,885      | 290,577            | 14,885        | 277,947            |
| 1880, June 1.....  | 12,443     | 286,785            | 23,482        | 338,990            |
| 1890, June 1.....  | 16,612     | 363,352            | 34,852        | 544,601            |
| 1900, June 1.....  | 17,156     | 538,091            | 50,684        | 1,251,080          |
| 1910, Apr. 15..... | 20,625     | 727,802            | 41,178        | 785,261            |
| 1911.....          | 20,823     | 832,209            | 39,679        | 815,184            |
| 1912.....          | 20,699     | 815,414            | 37,260        | 790,084            |
| 1913.....          | 20,497     | 922,783            | 36,030        | 949,645            |
| 1914.....          | 20,737     | 1,118,487          | 35,855        | 1,116,333          |
| 1915.....          | 21,262     | 1,176,338          | 37,067        | 1,237,376          |
| 1916.....          | 22,108     | 1,191,155          | 39,812        | 1,324,928          |
| 1917.....          | 22,894     | 1,365,261          | 41,689        | 1,497,621          |
| 1918.....          | 23,810     | 1,644,281          | 44,112        | 1,808,482          |
| 1919.....          | 23,475     | 1,835,770          | 45,088        | 1,993,442          |
| 1920.....          | 23,722     | 2,036,750          | 43,398        | 1,875,043          |
| 1921.....          | 23,694     | 1,615,249          | 41,994        | 1,316,727          |
| 1922.....          | 24,028     | 1,224,767          | 41,324        | 982,666            |

## CATTLE—Continued.

TABLE 305.—Cattle: Farm price per head, January 1, 1867-1922.

| Year.    | Milk cows. | Other cattle. | Year.    | Milk cows. | Other cattle. | Year.    | Milk cows. | Other cattle. | Year.    | Milk cows. | Other cattle. |
|----------|------------|---------------|----------|------------|---------------|----------|------------|---------------|----------|------------|---------------|
| 1867.... | \$28.74    | \$15.79       | 1881.... | \$23.95    | \$17.83       | 1895.... | \$21.97    | \$14.06       | 1909.... | \$32.36    | \$17.40       |
| 1868.... | 26.56      | 15.06         | 1882.... | 25.39      | 19.89         | 1896.... | 22.55      | 15.86         | 1910.... | 35.29      | 19.07         |
| 1869.... | 29.15      | 18.73         | 1883.... | 30.21      | 21.81         | 1897.... | 23.16      | 16.05         | 1911.... | 38.97      | 20.54         |
| 1870.... | 32.52      | 18.67         | 1884.... | 31.37      | 23.52         | 1898.... | 27.45      | 20.92         | 1912.... | 39.39      | 21.20         |
| 1871.... | 33.89      | 20.78         | 1885.... | 29.70      | 23.25         | 1899.... | 29.66      | 22.79         | 1913.... | 45.02      | 26.36         |
| 1872.... | 29.45      | 18.12         | 1886.... | 27.40      | 21.17         | 1900.... | 31.23      | 24.73         | 1914.... | 53.94      | 31.13         |
| 1873.... | 26.72      | 18.06         | 1887.... | 26.08      | 19.79         | 1901.... | 30.00      | 19.93         | 1915.... | 55.33      | 33.38         |
| 1874.... | 25.03      | 17.55         | 1888.... | 24.65      | 17.79         | 1902.... | 28.23      | 18.76         | 1916.... | 53.92      | 33.53         |
| 1875.... | 25.74      | 16.81         | 1889.... | 22.94      | 17.05         | 1903.... | 30.21      | 18.45         | 1917.... | 59.63      | 35.88         |
| 1876.... | 25.61      | 17.00         | 1890.... | 22.01      | 15.63         | 1904.... | 29.21      | 16.32         | 1918.... | 70.54      | 40.88         |
| 1877.... | 25.47      | 15.99         | 1891.... | 21.62      | 14.76         | 1905.... | 27.44      | 15.15         | 1919.... | 78.20      | 44.22         |
| 1878.... | 25.74      | 16.72         | 1892.... | 21.40      | 15.16         | 1906.... | 29.44      | 15.85         | 1920.... | 55.56      | 43.21         |
| 1879.... | 21.71      | 15.38         | 1893.... | 21.75      | 15.24         | 1907.... | 31.00      | 17.10         | 1921.... | 64.22      | 31.36         |
| 1880.... | 23.05      | 16.57         | 1894.... | 21.77      | 14.66         | 1908.... | 30.67      | 16.69         | 1922.... | 50.97      | 23.78         |

TABLE 306.—Cattle: Number and value on farms January 1, 1921 and 1922, by States.

| State.              | Milk cows.                 |        |                                |         |   |           | Other cattle.              |        |                                |         |   |         |
|---------------------|----------------------------|--------|--------------------------------|---------|---|-----------|----------------------------|--------|--------------------------------|---------|---|---------|
|                     | Number (thousands) Jan. 1— |        | Average price per head Jan. 1— |         | Farm value (thousands of dollars) Jan. 1— |           | Number (thousands) Jan. 1— |        | Average price per head Jan. 1— |         | Farm value (thousands of dollars) Jan. 1— |         |
|                     |                            |        |                                |         |   |           |                            |        |                                |         |   |         |
|                     | 1921                       | 1922   | 1921                           | 1922    | 1921                                      | 1922      | 1921                       | 1922   | 1921                           | 1922    | 1921                                      | 1922    |
| Maine.....          | 215                        | 212    | \$80.00                        | \$48.00 | \$12,900                                  | \$10,176  | 70                         | 71     | \$25.89                        | \$20.20 | \$1,792                                   | \$1,434 |
| New Hampshire.....  | 120                        | 121    | 74.00                          | 90.00   | 8,880                                     | 7,290     | 43                         | 41     | 30.39                          | 22.70   | 1,303                                     | 931     |
| Vermont.....        | 363                        | 368    | 65.00                          | 55.00   | 23,595                                    | 19,956    | 84                         | 84     | 21.40                          | 16.80   | 1,788                                     | 1,411   |
| Massachusetts.....  | 177                        | 180    | 94.00                          | 79.00   | 16,638                                    | 14,220    | 40                         | 42     | 31.50                          | 28.20   | 1,896                                     | 1,154   |
| Rhode Island.....   | 26                         | 26     | 100.00                         | 79.00   | 2,600                                     | 2,054     | 7                          | 7      | 35.00                          | 31.20   | 249                                       | 218     |
| Connecticut.....    | 135                        | 138    | 90.00                          | 74.00   | 12,150                                    | 10,212    | 38                         | 39     | 37.40                          | 29.70   | 1,421                                     | 1,138   |
| New York.....       | 1,695                      | 1,695  | 73.00                          | 67.00   | 123,735                                   | 113,565   | 410                        | 402    | 29.50                          | 24.70   | 12,095                                    | 9,929   |
| New Jersey.....     | 148                        | 151    | 110.00                         | 86.00   | 16,280                                    | 12,936    | 30                         | 31     | 47.70                          | 37.60   | 1,431                                     | 1,166   |
| Pennsylvania.....   | 1,050                      | 1,071  | 77.00                          | 60.00   | 80,850                                    | 64,290    | 481                        | 491    | 37.70                          | 29.00   | 18,134                                    | 14,239  |
| Delaware.....       | 38                         | 39     | 81.00                          | 57.00   | 3,078                                     | 2,223     | 9                          | 9      | 38.90                          | 26.90   | 350                                       | 242     |
| Maryland.....       | 188                        | 192    | 79.00                          | 63.00   | 14,852                                    | 12,096    | 95                         | 95     | 48.00                          | 33.20   | 4,370                                     | 3,254   |
| Virginia.....       | 422                        | 426    | 59.00                          | 43.00   | 24,898                                    | 18,318    | 487                        | 448    | 35.60                          | 24.70   | 17,337                                    | 11,066  |
| West Virginia.....  | 210                        | 216    | 66.00                          | 49.50   | 13,860                                    | 10,692    | 369                        | 354    | 41.70                          | 28.60   | 15,387                                    | 10,124  |
| North Carolina..... | 361                        | 365    | 58.00                          | 42.00   | 20,938                                    | 15,330    | 285                        | 274    | 24.20                          | 17.30   | 6,897                                     | 4,740   |
| South Carolina..... | 229                        | 236    | 58.00                          | 40.00   | 13,282                                    | 9,440     | 201                        | 201    | 20.30                          | 13.50   | 4,080                                     | 2,774   |
| Georgia.....        | 489                        | 509    | 45.00                          | 29.00   | 22,005                                    | 14,761    | 666                        | 686    | 19.60                          | 13.00   | 13,054                                    | 7,477   |
| Florida.....        | 90                         | 95     | 74.00                          | 57.50   | 6,660                                     | 5,462     | 766                        | 774    | 21.70                          | 16.10   | 16,622                                    | 12,461  |
| Ohio.....           | 1,038                      | 1,048  | 71.50                          | 56.00   | 74,217                                    | 58,688    | 816                        | 832    | 35.40                          | 29.70   | 31,334                                    | 24,710  |
| Indiana.....        | 720                        | 727    | 65.00                          | 53.00   | 46,800                                    | 38,531    | 778                        | 778    | 38.70                          | 30.00   | 30,109                                    | 23,340  |
| Illinois.....       | 1,114                      | 1,125  | 63.00                          | 52.00   | 70,182                                    | 58,500    | 1,492                      | 1,472  | 36.80                          | 29.30   | 54,906                                    | 43,276  |
| Michigan.....       | 948                        | 967    | 70.00                          | 53.00   | 66,360                                    | 51,251    | 558                        | 576    | 29.00                          | 21.80   | 17,062                                    | 12,567  |
| Wisconsin.....      | 2,180                      | 2,202  | 65.00                          | 62.00   | 141,700                                   | 114,504   | 880                        | 889    | 25.90                          | 19.60   | 22,792                                    | 17,424  |
| Minnesota.....      | 1,532                      | 1,578  | 58.00                          | 48.00   | 88,656                                    | 75,744    | 1,429                      | 1,343  | 23.20                          | 18.00   | 33,153                                    | 24,174  |
| Iowa.....           | 1,072                      | 1,093  | 62.00                          | 53.00   | 66,464                                    | 57,929    | 3,231                      | 3,134  | 34.50                          | 29.60   | 111,470                                   | 92,766  |
| Missouri.....       | 761                        | 769    | 67.50                          | 44.00   | 43,758                                    | 33,836    | 1,890                      | 1,890  | 34.20                          | 25.50   | 64,638                                    | 50,065  |
| North Dakota.....   | 461                        | 479    | 55.00                          | 43.00   | 25,355                                    | 20,597    | 843                        | 831    | 25.20                          | 18.50   | 21,370                                    | 15,374  |
| South Dakota.....   | 393                        | 417    | 56.00                          | 47.00   | 21,840                                    | 19,599    | 1,748                      | 1,601  | 29.80                          | 24.20   | 52,060                                    | 38,744  |
| Nebraska.....       | 501                        | 516    | 63.00                          | 55.00   | 31,563                                    | 27,348    | 2,452                      | 2,427  | 32.10                          | 27.40   | 81,161                                    | 66,500  |
| Kansas.....         | 685                        | 709    | 62.00                          | 46.00   | 43,090                                    | 32,614    | 2,317                      | 2,224  | 31.50                          | 24.50   | 72,986                                    | 54,485  |
| Kentucky.....       | 625                        | 620    | 57.00                          | 40.00   | 29,925                                    | 20,800    | 549                        | 511    | 28.40                          | 20.00   | 15,562                                    | 10,220  |
| Tennessee.....      | 490                        | 495    | 49.00                          | 35.00   | 24,010                                    | 17,325    | 634                        | 597    | 20.00                          | 15.20   | 13,060                                    | 9,074   |
| Alabama.....        | 496                        | 506    | 40.00                          | 29.00   | 19,840                                    | 14,674    | 586                        | 515    | 13.10                          | 10.00   | 7,022                                     | 5,190   |
| Mississippi.....    | 539                        | 541    | 47.00                          | 30.00   | 24,910                                    | 16,280    | 684                        | 677    | 14.10                          | 10.80   | 9,044                                     | 7,312   |
| Louisiana.....      | 220                        | 220    | 52.00                          | 45.00   | 11,440                                    | 9,460     | 556                        | 591    | 23.70                          | 15.20   | 13,888                                    | 8,953   |
| Texas.....          | 1,042                      | 1,073  | 63.00                          | 43.00   | 65,646                                    | 46,139    | 5,310                      | 5,393  | 31.20                          | 19.60   | 165,672                                   | 106,724 |
| Oklahoma.....       | 549                        | 560    | 52.00                          | 39.00   | 28,543                                    | 21,840    | 1,393                      | 1,421  | 24.40                          | 17.50   | 33,989                                    | 24,863  |
| Arkansas.....       | 501                        | 516    | 43.00                          | 29.00   | 21,543                                    | 14,964    | 628                        | 549    | 14.30                          | 10.90   | 7,550                                     | 5,984   |
| Montana.....        | 156                        | 164    | 75.00                          | 58.00   | 11,700                                    | 9,512     | 1,080                      | 1,200  | 35.40                          | 27.20   | 38,232                                    | 32,640  |
| Wyoming.....        | 43                         | 44     | 75.00                          | 71.00   | 3,225                                     | 3,124     | 816                        | 775    | 38.40                          | 29.70   | 31,334                                    | 23,018  |
| Colorado.....       | 236                        | 243    | 70.00                          | 57.00   | 16,520                                    | 13,851    | 1,447                      | 1,375  | 33.50                          | 26.40   | 48,474                                    | 36,300  |
| New Mexico.....     | 47                         | 48     | 75.00                          | 60.00   | 3,431                                     | 2,880     | 1,204                      | 1,352  | 35.20                          | 24.90   | 42,351                                    | 28,157  |
| Arizona.....        | 35                         | 40     | 105.00                         | 95.00   | 3,675                                     | 3,800     | 1,100                      | 1,000  | 38.00                          | 26.90   | 41,800                                    | 26,900  |
| Utah.....           | 82                         | 87     | 70.00                          | 61.00   | 5,740                                     | 5,307     | 425                        | 433    | 29.80                          | 26.40   | 12,665                                    | 11,431  |
| Nevada.....         | 18                         | 19     | 86.00                          | 69.00   | 1,548                                     | 1,311     | 343                        | 316    | 35.30                          | 30.40   | 12,279                                    | 10,518  |
| Idaho.....          | 146                        | 153    | 72.00                          | 65.00   | 10,512                                    | 9,945     | 543                        | 521    | 32.90                          | 27.50   | 17,565                                    | 14,828  |
| Washington.....     | 278                        | 296    | 75.00                          | 70.00   | 20,850                                    | 20,020    | 269                        | 256    | 33.10                          | 28.30   | 8,904                                     | 7,245   |
| Oregon.....         | 212                        | 216    | 75.00                          | 62.00   | 15,900                                    | 13,362    | 616                        | 628    | 37.70                          | 29.70   | 23,223                                    | 18,652  |
| California.....     | 620                        | 632    | 95.00                          | 76.00   | 58,900                                    | 48,032    | 1,350                      | 1,350  | 45.20                          | 34.70   | 62,376                                    | 47,886  |
| United States.....  | 22,594                     | 24,028 | 64.22                          | 50.97   | 1,515,249                                 | 1,224,767 | 41,993                     | 41,474 | 31.36                          | 23.78   | 1,316,727                                 | 982,665 |



## CATTLE—Continued.

TABLE 307.—Milk cows: Farm price per head, 15th of month, 1910-1921.

| Year.     | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1910..... | \$41.18 | \$40.35 | \$41.75 | \$42.22 | \$42.38 | \$43.46 | \$42.86 | \$42.77 | \$42.68 | \$43.20 | \$43.34 | \$43.41 |
| 1911..... | 44.70   | 44.43   | 45.42   | 44.81   | 44.54   | 43.86   | 42.44   | 42.26   | 42.22   | 42.69   | 42.70   | 42.72   |
| 1912..... | 42.89   | 43.40   | 44.09   | 45.14   | 45.03   | 45.84   | 45.41   | 46.11   | 46.79   | 47.30   | 47.38   | 48.62   |
| 1913..... | 49.51   | 51.42   | 54.02   | 55.34   | 54.80   | 55.20   | 54.80   | 54.78   | 55.78   | 55.47   | 57.71   | 57.19   |
| 1914..... | 57.99   | 59.09   | 59.23   | 59.60   | 59.85   | 59.82   | 59.67   | 60.72   | 59.58   | 59.53   | 58.77   | 58.23   |
| 1915..... | 58.47   | 57.99   | 58.00   | 57.73   | 58.29   | 58.59   | 60.31   | 58.34   | 58.38   | 58.76   | 57.35   | 55.79   |
| 1916..... | 57.79   | 57.99   | 59.51   | 60.03   | 60.98   | 61.68   | 62.04   | 61.32   | 61.41   | 62.19   | 62.67   | 63.18   |
| 1917..... | 63.92   | 65.93   | 68.43   | 72.09   | 72.78   | 72.87   | 72.81   | 72.53   | 73.93   | 75.79   | 75.00   | 76.16   |
| 1918..... | 76.54   | 78.36   | 80.71   | 82.45   | 84.11   | 84.74   | 84.97   | 84.06   | 85.21   | 85.41   | 84.51   | 85.78   |
| 1919..... | 86.10   | 89.15   | 88.15   | 90.91   | 93.43   | 93.84   | 94.51   | 94.72   | 93.42   | 93.43   | 93.27   | 95.54   |
| 1920..... | 94.42   | 95.27   | 94.94   | 95.36   | 94.56   | 94.56   | 91.23   | 90.50   | 89.40   | 85.90   | 77.56   | 70.42   |
| 1921..... | 66.82   | 63.44   | 65.37   | 64.35   | 62.63   | 59.89   | 56.55   | 55.85   | 54.33   | 53.39   | 53.28   | 53.30   |

TABLE 308.—Beef cattle: Farm price per 100 pounds, 15th of month, 1910-1921.

| Year.     | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910..... | \$4.71 | \$4.64 | \$4.87 | \$5.31 | \$5.23 | \$5.20 | \$4.84 | \$4.64 | \$4.65 | \$4.64 | \$4.48 | \$4.45 |
| 1911..... | 4.58   | 4.57   | 4.66   | 4.67   | 4.69   | 4.43   | 4.28   | 4.39   | 4.43   | 4.32   | 4.36   | 4.37   |
| 1912..... | 4.49   | 4.61   | 4.75   | 5.15   | 5.36   | 5.28   | 5.17   | 5.37   | 5.35   | 5.36   | 5.22   | 5.33   |
| 1913..... | 5.40   | 5.55   | 5.88   | 6.08   | 6.01   | 6.02   | 5.96   | 5.91   | 5.92   | 6.05   | 5.99   | 5.96   |
| 1914..... | 6.04   | 6.16   | 6.28   | 6.29   | 6.33   | 6.32   | 6.38   | 6.47   | 6.38   | 6.23   | 6.02   | 6.01   |
| 1915..... | 5.99   | 5.93   | 5.92   | 5.96   | 6.13   | 6.20   | 6.07   | 6.18   | 6.06   | 6.04   | 5.85   | 5.75   |
| 1916..... | 5.85   | 5.99   | 6.37   | 6.66   | 6.73   | 6.91   | 6.78   | 6.51   | 6.55   | 6.37   | 6.44   | 6.56   |
| 1917..... | 6.86   | 7.36   | 7.91   | 8.57   | 8.70   | 8.65   | 8.30   | 8.17   | 8.40   | 8.35   | 8.21   | 8.24   |
| 1918..... | 8.33   | 8.55   | 8.85   | 9.73   | 10.38  | 10.40  | 10.07  | 9.71   | 9.63   | 9.33   | 9.14   | 9.28   |
| 1919..... | 9.65   | 10.02  | 10.34  | 10.81  | 10.84  | 10.20  | 9.96   | 9.82   | 9.02   | 8.65   | 8.65   | 8.63   |
| 1920..... | 8.99   | 8.98   | 9.08   | 9.20   | 8.97   | 9.32   | 8.93   | 8.56   | 8.29   | 7.77   | 7.15   | 6.36   |
| 1921..... | 6.32   | 6.02   | 6.36   | 6.08   | 5.98   | 5.65   | 5.40   | 5.39   | 4.98   | 4.81   | 4.69   | 4.62   |

TABLE 309.—Veal calves: Farm price per 100 pounds, 15th of month, 1910-1921.

| Year.     | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910..... | \$6.41 | \$6.28 | \$6.59 | \$6.54 | \$6.30 | \$6.57 | \$6.37 | \$6.29 | \$6.43 | \$6.41 | \$6.39 | \$6.38 |
| 1911..... | 6.50   | 6.38   | 6.48   | 5.96   | 5.68   | 5.72   | 5.74   | 5.93   | 6.11   | 6.15   | 6.10   | 5.98   |
| 1912..... | 6.06   | 6.07   | 6.11   | 6.22   | 6.23   | 6.33   | 6.33   | 6.62   | 6.83   | 6.90   | 6.77   | 6.88   |
| 1913..... | 7.06   | 7.23   | 7.49   | 7.38   | 7.17   | 7.53   | 7.40   | 7.53   | 7.73   | 7.72   | 7.70   | 7.74   |
| 1914..... | 7.89   | 7.90   | 7.92   | 7.68   | 7.59   | 7.69   | 7.80   | 8.08   | 8.06   | 7.97   | 7.78   | 7.61   |
| 1915..... | 7.06   | 7.62   | 7.50   | 7.31   | 7.35   | 7.53   | 7.87   | 7.75   | 7.80   | 7.91   | 7.69   | 7.61   |
| 1916..... | 7.67   | 7.87   | 8.11   | 8.00   | 8.08   | 8.39   | 8.54   | 8.59   | 8.77   | 8.59   | 8.60   | 8.79   |
| 1917..... | 9.15   | 9.88   | 9.94   | 10.49  | 10.48  | 10.60  | 10.77  | 10.56  | 11.08  | 11.10  | 10.66  | 10.98  |
| 1918..... | 11.16  | 11.17  | 11.33  | 11.71  | 11.62  | 11.88  | 12.33  | 12.22  | 12.57  | 12.35  | 11.94  | 12.31  |
| 1919..... | 12.39  | 12.18  | 12.65  | 12.78  | 12.11  | 12.40  | 13.38  | 13.43  | 13.39  | 12.87  | 12.65  | 12.67  |
| 1920..... | 12.89  | 13.12  | 12.98  | 12.72  | 11.69  | 11.68  | 11.44  | 11.64  | 11.88  | 11.64  | 10.77  | 9.27   |
| 1921..... | 9.34   | 9.08   | 9.05   | 7.73   | 7.55   | 7.43   | 7.37   | 7.31   | 7.07   | 7.61   | 7.20   | 7.14   |

CATTLE—Continued.

TABLE 310.—Cattle: *Monthly and yearly average price per 100 pounds of good beef steers, Chicago, 1910 to 1921.*<sup>1</sup>

| Year.               | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Average. <sup>2</sup> |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|
| 1910.....           | \$6.20 | \$6.35 | \$7.35 | \$7.55 | \$7.50 | \$7.50 | \$7.10 | \$6.55 | \$6.50 | \$6.80 | \$6.20 | \$5.00 | \$5.53                |
| 1911.....           | 6.15   | 6.15   | 6.20   | 6.10   | 5.95   | 6.05   | 6.30   | 6.95   | 6.50   | 6.75   | 6.70   | 6.65   | 6.40                  |
| 1912.....           | 6.85   | 6.60   | 7.20   | 7.65   | 7.95   | 8.00   | 7.90   | 8.50   | 9.15   | 7.90   | 8.10   | 7.55   | 7.80                  |
| 1913.....           | 7.80   | 8.25   | 8.30   | 8.15   | 8.00   | 8.15   | 8.25   | 8.30   | 8.60   | 8.40   | 8.25   | 8.20   | 8.21                  |
| 1914.....           | 8.45   | 8.30   | 8.35   | 8.50   | 8.40   | 8.60   | 8.30   | 9.10   | 9.35   | 9.05   | 8.60   | 8.35   | 8.65                  |
| 1915.....           | 8.05   | 7.50   | 7.65   | 7.70   | 8.35   | 8.30   | 9.20   | 9.05   | 8.95   | 8.50   | 8.70   | 8.35   | 8.43                  |
| 1916.....           | 8.35   | 8.35   | 8.75   | 9.10   | 9.50   | 9.55   | 9.25   | 9.45   | 9.40   | 9.75   | 10.15  | 10.00  | 9.33                  |
| 1917.....           | 10.15  | 10.50  | 11.25  | 11.75  | 11.90  | 12.15  | 12.35  | 12.70  | 13.10  | 11.70  | 11.10  | 11.40  | 11.67                 |
| 1918.....           | 12.10  | 12.00  | 12.60  | 14.70  | 15.40  | 15.85  | 16.05  | 15.75  | 16.00  | 14.80  | 15.05  | 14.90  | 14.60                 |
| 1919.....           | 15.80  | 15.95  | 16.05  | 15.85  | 15.00  | 13.55  | 15.60  | 16.45  | 15.50  | 16.15  | 15.10  | 14.35  | 15.45                 |
| 1920.....           | 13.95  | 13.05  | 13.10  | 12.30  | 12.25  | 14.95  | 14.65  | 14.30  | 14.95  | 14.61  | 11.65  | 10.05  | 13.32                 |
| 1921.....           | 8.94   | 8.57   | 9.41   | 8.22   | 8.33   | 7.94   | 8.09   | 8.32   | 7.67   | 7.59   | 7.52   | 7.31   | 8.16                  |
| 12-year average.... | 9.40   | 9.30   | 9.68   | 9.80   | 9.38   | 10.12  | 10.30  | 10.48  | 10.51  | 10.18  | 9.76   | 9.45   | 9.90                  |

<sup>1</sup> Prior to July, 1920, from Chicago Drovers' Journal Yearbook. <sup>2</sup> Simple average of monthly average prices.

TABLE 311.—Calves: *Monthly and yearly average price per 100 pounds, Chicago, 1910 to 1921.*<sup>1</sup>

| Year.               | Jan.   | F.     | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Average. <sup>2</sup> |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|
| 1910.....           | \$8.60 | \$8.65 | \$9.00 | \$7.85 | \$7.35 | \$7.85 | \$7.60 | \$7.75 | \$8.50 | \$8.65 | \$8.75 | \$8.50 | \$8.25                |
| 1911.....           | 8.75   | 8.40   | 7.40   | 6.60   | 7.25   | 7.60   | 7.40   | 8.00   | 8.75   | 8.60   | 8.35   | 7.85   | 7.81                  |
| 1912.....           | 8.75   | 7.50   | 8.00   | 7.40   | 7.75   | 8.00   | 8.75   | 9.75   | 11.25  | 10.00  | 9.85   | 10.25  | 8.94                  |
| 1913.....           | 9.75   | 9.85   | 10.50  | 8.50   | 9.25   | 9.75   | 10.40  | 11.50  | 11.25  | 10.50  | 10.35  | 10.75  | 10.19                 |
| 1914.....           | 11.00  | 10.75  | 9.00   | 8.85   | 9.50   | 9.40   | 10.60  | 11.00  | 11.40  | 10.65  | 10.35  | 8.65   | 10.10                 |
| 1915.....           | 9.85   | 10.35  | 10.00  | 8.40   | 9.15   | 9.60   | 10.25  | 11.50  | 11.25  | 10.85  | 10.15  | 9.65   | 10.06                 |
| 1916.....           | 10.15  | 10.65  | 9.65   | 8.75   | 10.40  | 11.25  | 11.40  | 12.00  | 12.40  | 11.50  | 11.85  | 11.75  | 10.98                 |
| 1917.....           | 13.40  | 12.65  | 13.40  | 12.50  | 13.25  | 13.40  | 13.00  | 15.15  | 15.00  | 14.85  | 13.50  | 15.25  | 13.75                 |
| 1918.....           | 15.35  | 14.15  | 15.25  | 14.50  | 13.50  | 16.02  | 16.67  | 17.28  | 18.63  | 16.38  | 16.96  | 16.01  | 15.92                 |
| 1919.....           | 15.62  | 15.75  | 15.01  | 14.31  | 14.66  | 16.37  | 17.88  | 19.62  | 20.52  | 18.05  | 17.60  | 16.56  | 16.83                 |
| 1920.....           | 17.74  | 16.73  | 16.73  | 14.22  | 12.12  | 13.68  | 13.98  | 15.05  | 16.39  | 14.18  | 13.74  | 10.39  | 14.58                 |
| 1921.....           | 11.49  | 11.02  | 10.33  | 8.12   | 8.66   | 8.72   | 9.73   | 9.39   | 10.71  | 8.68   | 7.70   | 7.51   | 9.36                  |
| 12-year average.... | 11.70  | 11.37  | 11.19  | 10.00  | 10.24  | 10.97  | 11.47  | 12.34  | 13.00  | 11.94  | 11.59  | 11.12  | 11.41                 |

<sup>1</sup> Prior to June, 1918, from Chicago Drovers' Journal Yearbook. <sup>2</sup> Simple average of monthly average prices.

CATTLE—Continued.  
TABLE 312.—Cattle and calves: Monthly average price per 100 pounds, 1921.  
CHICAGO.

| Month.         | Beef steers.                     |         |           |           |                   |         | Butcher cattle.               |                           | Canners and cutters.       |                    | Veal calves.                                  |                                    | Feeder steers.                             |   | Stock cattle.               |                                       |         |                        |
|----------------|----------------------------------|---------|-----------|-----------|-------------------|---------|-------------------------------|---------------------------|----------------------------|--------------------|---|------------------------------------|--|---|-----------------------------|---------------------------------------|---------|------------------------|
|                | Lightweight (1,101 pounds down). |         |           |           |                   |         | Half-ers, com- mon to choice. | Cows, com- mon to choice. | Bulls, com- mon to choice. | Cows and half-ers. | Light to me- dium weight, me- dium to choice. | Heavy, weight, com- mon to choice. | Heavy (1,001 lbs. up), com- mon to choice. | Light and me- dium (750 to 1,000 lbs.), com- mon to choice. | Steers, com- mon to choice. | Cows and heifers, com- mon to choice. | Calves. | Com- mon and me- dium. |
|                | Choice and prime.                | Good.   | Me- dium. | Com- mon. | Choice and prime. | Good.   |                               |                           |                            |                    |   |                                    |  |   |                             |                                       |         |                        |
| January.....   | \$11.13                          | \$10.13 | \$9.18    | \$8.06    | \$11.13           | \$10.07 | \$7.78                        | \$9.48                    | \$6.30                     | \$3.07             | \$4.85  | \$7.70                             | \$8.12                                     | \$7.06  | \$6.63                      | \$5.17                                | .....   | .....                  |
| February.....  | 9.97                             | 9.22    | 8.52      | 7.74      | 9.92              | 9.08    | 6.98                          | 7.45                      | 5.54                       | 3.41               | 4.37  | 6.81                               | 7.72                                       | 7.36  | 6.68                        | 4.92                                  | .....   | .....                  |
| March.....     | 10.23                            | 9.68    | 8.97      | 8.10      | 10.32             | 9.68    | 7.92                          | 7.63                      | 5.97                       | 3.87               | 4.64  | 6.64                               | 8.61                                       | 8.21  | 7.32                        | 5.39                                  | .....   | .....                  |
| April.....     | 9.06                             | 8.41    | 7.91      | 7.39      | 9.19              | 8.57    | 7.12                          | 7.15                      | 6.16                       | 3.47               | 3.83  | 5.92                               | 7.85                                       | 7.54  | 6.81                        | 4.93                                  | .....   | .....                  |
| May.....       | 9.09                             | 8.52    | 7.98      | 7.39      | 9.20              | 8.58    | 7.13                          | 7.23                      | 6.26                       | 3.78               | 3.66  | 6.03                               | 7.72                                       | 7.55  | 6.84                        | 4.93                                  | .....   | .....                  |
| June.....      | 8.81                             | 8.29    | 7.81      | 7.04      | 8.95              | 8.39    | 6.79                          | 6.48                      | 5.47                       | 3.06               | 3.40  | 5.85                               | 7.09                                       | 6.90  | 5.93                        | 4.43                                  | .....   | .....                  |
| July.....      | 9.01                             | 8.54    | 7.84      | 6.92      | 9.20              | 8.70    | 7.83                          | 6.63                      | 5.47                       | 2.98               | 3.03  | 5.69                               | 6.32                                       | 5.51  | 5.51                        | 4.00                                  | .....   | .....                  |
| August.....    | 9.88                             | 9.06    | 7.81      | 6.46      | 10.19             | 9.18    | 7.73                          | 6.49                      | 5.35                       | 2.95               | 3.25  | 5.45                               | 6.56                                       | 6.25  | 5.33                        | 3.91                                  | .....   | .....                  |
| September..... | 9.62                             | 8.54    | 7.17      | 5.70      | 10.20             | 9.01    | 5.50                          | 6.49                      | 5.21                       | 2.96               | 3.17  | 5.63                               | 6.12                                       | 5.95  | 5.33                        | 3.91                                  | .....   | .....                  |
| October.....   | 10.27                            | 9.23    | 7.63      | 5.58      | 11.32             | 9.92    | 7.61                          | 6.57                      | 5.14                       | 3.07               | 3.36  | 5.77                               | 5.99                                       | 5.85  | 5.33                        | 4.03                                  | .....   | .....                  |
| November.....  | 10.14                            | 8.97    | 7.43      | 5.44      | 11.27             | 9.81    | 7.46                          | 6.26                      | 4.79                       | 2.86               | 3.27  | 5.21                               | 5.82                                       | 5.06  | 5.03                        | 4.03                                  | .....   | .....                  |
| December.....  | 9.69                             | 8.59    | 7.30      | 5.94      | 10.26             | 8.90    | 5.30                          | 5.94                      | 4.75                       | 2.68               | 3.30  | 5.38                               | 5.90                                       | 5.76  | 5.29                        | 3.91                                  | .....   | .....                  |
| Average.....   | 9.75                             | 8.93    | 7.96      | 6.82      | 10.11             | 9.16    | 6.57                          | 6.76                      | 5.62                       | 3.25               | 3.68  | 6.01                               | 7.01                                       | 6.75  | 5.99                        | 4.47                                  | .....   | .....                  |

## KANSAS CITY.

| Month.        | Choice and prime. | Good.  | Me- dium. | Com- mon. | Choice and prime. | Good.  | Me- dium. | Com- mon. | Half-ers, com- mon to choice. | Cows, com- mon to choice. | Bulls, com- mon to choice. | Cows and half-ers. | Light to me- dium weight, me- dium to choice. | Heavy, weight, com- mon to choice. | Light and me- dium (750 to 1,000 lbs.), com- mon to choice. | Steers, com- mon to choice. | Cows and heifers, com- mon to choice. | Calves. | Com- mon and me- dium. |
|---------------|-------------------|--------|-----------|-----------|-------------------|--------|-----------|-----------|-------------------------------|---------------------------|----------------------------|--------------------|---|------------------------------------|---|-----------------------------|---------------------------------------|---------|------------------------|
| January.....  | \$10.76           | \$9.59 | \$8.56    | \$7.62    | \$10.46           | \$9.08 | \$7.96    | \$7.06    | \$6.89                        | \$5.69                    | \$5.51                     | \$3.73             | \$4.20  | \$3.22                             | \$7.70  | \$6.46                      | \$5.04                                | \$7.95  | \$5.65                 |
| February..... | 9.12              | 8.45   | 7.89      | 7.31      | 8.94              | 8.18   | 7.57      | 6.81      | 6.22                          | 6.24                      | 4.89                       | 3.61               | 3.93  | 3.45                               | 7.38  | 6.34                        | 4.76                                  | 6.90    | 5.05                   |
| March.....    | 9.77              | 9.12   | 8.53      | 7.97      | 9.61              | 8.93   | 8.30      | 7.53      | 6.89                          | 5.97                      | 5.18                       | 3.69               | 3.80  | 3.45                               | 8.03  | 7.26                        | 5.31                                  | 7.34    | 5.39                   |
| April.....    | 8.63              | 7.96   | 7.56      | 7.13      | 8.65              | 7.93   | 7.47      | 6.82      | 6.57                          | 6.73                      | 4.82                       | 3.49               | 3.85  | 3.61                               | 7.44  | 6.22                        | 4.66                                  | 7.54    | 5.47                   |
| May.....      | 8.63              | 8.07   | 7.67      | 7.21      | 8.05              | 8.03   | 7.60      | 7.03      | 6.51                          | 5.63                      | 5.34                       | 3.25               | 3.66  | 7.49                               | 7.29  | 6.18                        | 4.92                                  | 7.06    | 5.11                   |

|                |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| June.....      | 8.36 | 7.87 | 7.38 | 6.69 | 8.54  | 7.90 | 7.27 | 6.34 | 5.81 | 4.78 | 4.35 | 2.62 | 3.15 | 7.36 | 5.87 | 6.93 | 6.06 | 5.41 | 4.33 | 6.58 | 4.37 |
| July.....      | 8.07 | 8.24 | 7.44 | 6.67 | 8.16  | 8.51 | 7.89 | 5.73 | 5.81 | 4.75 | 4.55 | 2.55 | 2.78 | 7.45 | 5.71 | 6.74 | 6.40 | 5.20 | 4.03 | 5.93 | 4.07 |
| August.....    | 9.70 | 8.74 | 7.20 | 6.07 | 8.33  | 8.24 | 7.13 | 5.22 | 5.88 | 4.42 | 4.28 | 2.68 | 2.78 | 6.98 | 5.14 | 6.61 | 6.16 | 5.12 | 3.98 | 5.93 | 4.20 |
| September..... | 9.36 | 8.26 | 6.58 | 5.10 | 9.84  | 8.47 | 6.48 | 4.78 | 5.14 | 4.05 | 4.15 | 2.68 | 2.72 | 6.98 | 5.20 | 6.13 | 5.52 | 5.12 | 3.98 | 6.01 |      |
| October.....   | 9.60 | 8.45 | 6.70 | 5.08 | 10.24 | 8.73 | 6.75 | 4.74 | 5.69 | 4.41 | 4.08 | 2.68 | 2.88 | 8.42 | 5.02 | 5.93 | 5.52 | 5.10 | 3.98 | 6.23 | 4.48 |
| November.....  | 9.37 | 7.71 | 6.18 | 4.88 | 10.51 | 8.33 | 6.22 | 4.09 | 5.71 | 4.48 | 3.85 | 2.82 | 2.92 | 7.07 | 4.81 | 5.03 | 5.51 | 4.91 | 3.75 | 5.94 | 4.11 |
| December.....  | 8.76 | 7.42 | 6.28 | 5.20 | 9.97  | 8.06 | 6.28 | 5.01 | 5.71 | 4.43 | 3.80 | 2.66 | 2.82 | 7.07 | 5.19 | 5.76 | 5.71 | 5.14 | 3.75 | 6.14 | 4.22 |
| Average.....   | 9.21 | 8.32 | 7.34 | 6.34 | 9.54  | 8.42 | 7.20 | 5.99 | 6.16 | 5.02 | 4.56 | 3.00 | 3.27 | 8.15 | 5.76 | 6.91 | 6.66 | 5.71 | 4.86 | 6.62 | 4.69 |

OMAHA.

|                |         |        |        |        |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|----------------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| January.....   | \$10.65 | \$9.47 | \$8.35 | \$7.20 | \$10.48 | \$9.05 | \$7.69 | \$6.72 | \$5.92 | \$5.54 | \$3.87 | \$4.32 | \$9.33 | \$6.65 | \$8.19 | \$7.49 | \$6.47 | \$5.17 | \$7.12 | \$5.34 |
| February.....  | 8.93    | 8.18   | 7.41   | 6.68   | 8.61    | 7.87   | 7.17   | 6.38   | 5.37   | 4.85   | 3.52   | 4.05   | 8.63   | 6.14   | 7.25   | 6.77   | 5.93   | 4.82   | 6.95   | 5.17   |
| March.....     | 9.77    | 8.73   | 7.43   | 6.03   | 9.66    | 8.68   | 8.16   | 7.33   | 6.24   | 5.60   | 3.83   | 4.40   | 8.63   | 6.72   | 8.22   | 7.96   | 7.19   | 5.64   | 7.62   | 5.87   |
| April.....     | 8.58    | 7.55   | 7.05   | 5.71   | 8.71    | 8.21   | 7.65   | 6.89   | 5.62   | 5.33   | 3.68   | 3.45   | 7.72   | 6.69   | 7.47   | 7.22   | 6.60   | 4.71   | 7.03   | 5.88   |
| May.....       | 8.65    | 8.10   | 7.57   | 7.05   | 8.75    | 8.21   | 7.62   | 6.88   | 5.67   | 5.38   | 3.58   | 3.72   | 8.18   | 6.98   | 7.80   | 7.04   | 6.37   | 4.83   | 7.55   | 5.88   |
| June.....      | 8.46    | 7.80   | 7.30   | 6.77   | 8.59    | 7.97   | 7.34   | 6.50   | 5.33   | 4.95   | 2.81   | 3.26   | 7.87   | 6.14   | 7.07   | 6.05   | 5.93   | 4.39   | 7.11   | 5.40   |
| July.....      | 8.78    | 8.19   | 7.57   | 6.93   | 9.06    | 8.43   | 7.60   | 6.28   | 5.43   | 5.10   | 2.90   | 3.04   | 8.32   | 5.96   | 6.65   | 6.24   | 5.44   | 4.09   | 7.00   | 5.13   |
| August.....    | 9.56    | 8.64   | 7.49   | 6.07   | 9.81    | 8.82   | 7.38   | 5.64   | 4.48   | 4.08   | 2.85   | 3.06   | 7.34   | 5.47   | 6.69   | 6.18   | 5.32   | 4.03   | 6.84   | 4.77   |
| September..... | 9.21    | 8.08   | 6.57   | 5.04   | 9.90    | 8.30   | 6.33   | 4.72   | 4.91   | 4.74   | 2.85   | 2.81   | 8.36   | 5.58   | 6.15   | 5.53   | 5.28   | 4.03   | 6.86   | 4.62   |
| October.....   | 9.37    | 8.11   | 6.47   | 4.80   | 10.64   | 8.63   | 6.14   | 4.53   | 4.71   | 4.43   | 2.95   | 3.04   | 8.36   | 5.28   | 5.99   | 5.72   | 5.19   | 4.14   | 6.22   | 4.42   |
| November.....  | 9.67    | 8.26   | 6.62   | 4.86   | 10.85   | 8.71   | 6.10   | 4.58   | 4.60   | 4.30   | 3.07   | 3.24   | 7.60   | 4.93   | 5.83   | 5.52   | 5.00   | 4.28   | 6.93   | 4.12   |
| December.....  | 9.18    | 7.84   | 6.51   | 5.02   | 10.04   | 8.36   | 6.31   | 4.86   | 4.70   | 4.16   | 2.48   | 3.03   | 7.12   | 5.19   | 5.94   | 5.12   | 4.57   | 3.23   | 6.20   | 4.61   |
| Average.....   | 9.23    | 8.32   | 7.32   | 6.24   | 9.59    | 8.46   | 7.12   | 5.94   | 5.26   | 4.96   | 3.15   | 3.45   | 8.15   | 5.95   | 6.83   | 6.43   | 5.82   | 4.52   | 6.53   | 5.10   |

EAST ST. LOUIS.

|                |         |        |        |        |         |        |        |        |        |        |        |        |         |        |        |        |        |        |        |        |
|----------------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| January.....   | \$10.90 | \$9.54 | \$8.26 | \$7.58 | \$10.80 | \$9.48 | \$8.13 | \$7.10 | \$6.30 | \$6.02 | \$3.92 | \$4.23 | \$10.40 | \$7.15 | \$7.74 | \$7.20 | \$6.50 | \$5.12 | \$6.92 | \$5.42 |
| February.....  | 8.77    | 8.23   | 7.69   | 6.92   | 9.13    | 8.25   | 7.27   | 6.35   | 5.60   | 5.24   | 3.64   | 4.13   | 9.62    | 7.32   | 7.02   | 7.02   | 6.55   | 4.85   | 6.72   | 5.30   |
| March.....     | 9.77    | 8.73   | 7.43   | 6.03   | 9.66    | 8.68   | 8.16   | 7.33   | 6.24   | 5.60   | 3.83   | 4.40   | 9.30    | 7.18   | 7.63   | 7.70   | 6.64   | 5.64   | 6.84   | 5.85   |
| April.....     | 8.58    | 7.55   | 7.05   | 5.71   | 8.71    | 8.21   | 7.65   | 6.89   | 5.62   | 5.33   | 3.68   | 3.45   | 7.72    | 6.69   | 7.22   | 7.18   | 6.34   | 5.02   | 6.92   | 5.88   |
| May.....       | 8.65    | 8.10   | 7.57   | 7.05   | 8.75    | 8.21   | 7.62   | 6.88   | 5.67   | 5.38   | 3.58   | 3.72   | 8.18    | 6.98   | 6.80   | 6.70   | 5.84   | 4.70   | .....  | .....  |
| June.....      | 8.46    | 7.80   | 7.30   | 6.71   | 8.75    | 8.10   | 7.34   | 6.37   | 5.05   | 4.90   | 2.95   | 3.39   | 7.83    | 6.24   | 6.20   | 5.99   | 5.05   | 4.18   | 0.30   | 5.03   |
| July.....      | 8.63    | 8.11   | 7.40   | 6.51   | 9.05    | 8.33   | 7.51   | 6.28   | 4.88   | 4.80   | 2.84   | 3.15   | 8.20    | 6.07   | 6.93   | 6.43   | 4.61   | 3.76   | .....  | .....  |
| August.....    | 9.33    | 8.43   | 7.71   | 6.13   | 9.91    | 9.16   | 7.60   | 5.84   | 4.04   | 4.71   | 2.64   | 3.16   | 7.60    | 6.12   | 6.15   | 5.83   | 5.00   | 4.12   | 6.06   | 5.04   |
| September..... | 9.74    | 8.43   | 6.73   | 5.01   | 9.90    | 8.74   | 6.69   | 4.62   | 4.55   | 4.71   | 2.64   | 2.98   | 8.96    | 5.70   | 6.72   | 5.47   | 4.88   | 4.04   | 6.02   | 4.90   |
| October.....   | 9.42    | 8.85   | 6.82   | 4.02   | 10.72   | 9.41   | 6.85   | 4.55   | 4.55   | 4.65   | 2.70   | 2.78   | 8.52    | 5.43   | 5.53   | 5.28   | 4.82   | 4.08   | 5.86   | 4.67   |
| November.....  | 9.34    | 8.40   | 6.51   | 5.49   | 10.84   | 9.35   | 6.78   | 4.60   | 4.60   | 4.38   | 2.83   | 2.80   | 7.64    | 5.94   | 6.31   | 5.15   | 4.78   | 3.72   | 5.79   | 4.57   |
| December.....  | 9.16    | 8.26   | 6.84   | 5.06   | 10.25   | 8.88   | 7.04   | 5.27   | 4.47   | 4.01   | 2.60   | 2.83   | 7.50    | 5.55   | 5.94   | 5.22   | 4.80   | 3.72   | 5.73   | 4.25   |
| Average.....   | 9.30    | 8.50   | 7.44   | 6.38   | 9.77    | 8.80   | 7.43   | 6.02   | 5.26   | 5.05   | 3.12   | 3.45   | 8.47    | 6.33   | 6.92   | 6.10   | 5.44   | 4.41   | 6.31   | 5.06   |

## CATTLE—Continued.

TABLE 313.—Cattle and calves: Yearly receipts at principal markets, and at all markets, 1900 to 1921.

[In thousands—i. e., 000 omitted.]

Receipts at principal and other markets.<sup>1</sup>

| Year.     | Chicago. | Kansas City. | Omaha. | St. Paul. | East St. Louis. | Fort Worth. | Denver. | Sioux City. | St. Joseph. | Total. | All other markets. | Total, <sup>2</sup> all markets. |
|-----------|----------|--------------|--------|-----------|-----------------|-------------|---------|-------------|-------------|--------|--------------------|----------------------------------|
| 1900..... | 2,885    | 2,083        | 828    | 221       | 698             | (*)         | 240     | 300         | 390         | 7,625  | .....              | .....                            |
| 1901..... | 3,213    | 2,127        | 818    | 190       | 892             | (*)         | 227     | 309         | 439         | 8,215  | .....              | .....                            |
| 1902..... | 3,193    | 2,279        | 1,011  | 306       | 1,113           | 132         | 324     | 405         | 517         | 9,280  | .....              | .....                            |
| 1903..... | 3,704    | 2,137        | 1,071  | 303       | 1,140           | 447         | 286     | 379         | 625         | 10,692 | .....              | .....                            |
| 1904..... | 3,527    | 2,163        | 944    | 339       | 1,074           | 643         | 265     | 331         | 587         | 9,923  | .....              | .....                            |
| 1905..... | 3,791    | 2,423        | 1,026  | 489       | 1,124           | 813         | 294     | 403         | 547         | 10,910 | .....              | .....                            |
| 1906..... | 3,742    | 2,556        | 1,079  | 487       | 1,121           | 838         | 329     | 385         | 606         | 11,143 | .....              | .....                            |
| 1907..... | 3,727    | 2,670        | 1,159  | 520       | 1,133           | 1,022       | 307     | 410         | 616         | 11,564 | .....              | .....                            |
| 1908..... | 3,451    | 2,458        | 1,037  | 463       | 1,145           | 1,069       | 420     | 385         | 584         | 11,022 | .....              | .....                            |
| 1909..... | 3,340    | 2,660        | 1,125  | 497       | 1,241           | 1,197       | 426     | 426         | 592         | 11,504 | .....              | .....                            |
| 1910..... | 3,553    | 2,507        | 1,224  | 604       | 1,208           | 1,071       | 399     | 439         | 505         | 11,570 | .....              | .....                            |
| 1911..... | 3,453    | 2,370        | 1,174  | 539       | 1,067           | 884         | 298     | 487         | 513         | 10,785 | .....              | .....                            |
| 1912..... | 3,158    | 2,147        | 1,017  | 524       | 1,200           | 1,039       | 414     | 431         | 494         | 10,424 | .....              | .....                            |
| 1913..... | 2,888    | 2,319        | 962    | 532       | 1,100           | 1,186       | 499     | 894         | 450         | 10,339 | .....              | .....                            |
| 1914..... | 2,601    | 1,957        | 939    | 555       | 1,041           | 1,176       | 443     | 368         | 356         | 9,466  | .....              | .....                            |
| 1915..... | 2,685    | 1,968        | 1,218  | 856       | 992             | 944         | 424     | 584         | 441         | 10,057 | 4,496              | 14,553                           |
| 1916..... | 3,250    | 2,331        | 1,434  | 941       | 1,200           | 1,081       | 601     | 602         | 490         | 11,520 | 5,756              | 17,276                           |
| 1917..... | 3,820    | 2,902        | 1,720  | 1,197     | 1,405           | 1,960       | 653     | 707         | 679         | 15,034 | 8,082              | 23,096                           |
| 1918..... | 4,448    | 3,320        | 1,998  | 1,430     | 1,509           | 1,665       | 728     | 818         | 870         | 16,781 | 8,514              | 25,295                           |
| 1919..... | 4,263    | 3,085        | 1,975  | 1,491     | 1,473           | 1,267       | 824     | 814         | 750         | 15,362 | 8,662              | 24,024                           |
| 1920..... | 3,849    | 2,800        | 1,608  | 1,373     | 1,254           | 1,134       | 617     | 752         | 648         | 13,725 | 8,472              | 22,197                           |
| 1921..... | 3,540    | 2,469        | 1,435  | 985       | 1,077           | 984         | 482     | 620         | 558         | 12,150 | 7,637              | 19,787                           |

<sup>1</sup> Prior to 1915 receipts compiled from yearbooks of stockyard companies.<sup>2</sup> Figures not available prior to 1915.<sup>3</sup> Not in operation.TABLE 314.—Cattle and calves: Monthly and yearly receipts at Chicago, Kansas City, Omaha, and East St. Louis, combined, 1910 to 1921.<sup>1</sup>

[In thousands—i. e., 000 omitted.]

| Year.                | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct.  | Nov.  | Dec.  | Total. |
|----------------------|------|------|------|------|------|-------|-------|------|-------|-------|-------|-------|--------|
| 1910.....            | 641  | 515  | 590  | 498  | 553  | 630   | 662   | 915  | 905   | 1,040 | 834   | 617   | 8,490  |
| 1911.....            | 700  | 516  | 555  | 498  | 612  | 620   | 680   | 764  | 766   | 1,044 | 767   | 555   | 8,067  |
| 1912.....            | 660  | 486  | 502  | 515  | 484  | 462   | 516   | 667  | 808   | 1,010 | 674   | 676   | 7,520  |
| 1913.....            | 606  | 486  | 481  | 523  | 452  | 432   | 568   | 688  | 923   | 824   | 606   | 588   | 7,270  |
| 1914.....            | 526  | 445  | 481  | 445  | 404  | 473   | 457   | 565  | 784   | 813   | 558   | 581   | 6,532  |
| 1915.....            | 514  | 377  | 523  | 465  | 461  | 474   | 462   | 611  | 730   | 834   | 798   | 605   | 6,853  |
| 1916.....            | 606  | 534  | 558  | 452  | 568  | 530   | 535   | 807  | 861   | 1,146 | 915   | 716   | 8,218  |
| 1917.....            | 807  | 567  | 533  | 600  | 706  | 701   | 773   | 808  | 1,029 | 1,209 | 1,148 | 864   | 9,947  |
| 1918.....            | 768  | 709  | 779  | 681  | 688  | 706   | 967   | 911  | 1,347 | 1,320 | 1,167 | 1,032 | 11,269 |
| 1919.....            | 998  | 682  | 646  | 706  | 628  | 641   | 881   | 926  | 1,131 | 1,362 | 1,169 | 975   | 10,786 |
| 1920.....            | 847  | 642  | 698  | 532  | 642  | 696   | 669   | 868  | 1,032 | 932   | 1,029 | 618   | 9,205  |
| 1921.....            | 744  | 520  | 579  | 606  | 625  | 675   | 642   | 668  | 866   | 1,019 | 795   | 586   | 8,521  |
| 12-year average..... | 701  | 540  | 576  | 561  | 571  | 594   | 642   | 783  | 944   | 1,054 | 871   | 701   | 8,549  |

<sup>1</sup> Figures prior to 1915 compiled from yearbooks of stockyard companies.

CATTLE—Continued.

TABLE 315.—Cattle and calves: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919–1921.

[In thousands—i. e., 000 omitted.]

| Stockyards.           | Receipts.        |       |       | Local slaughter. |                  |                  | Stocker and feeder shipments. |                  |                  |
|-----------------------|------------------|-------|-------|------------------|------------------|------------------|-------------------------------|------------------|------------------|
|                       | 1919             | 1920  | 1921  | 1919             | 1920             | 1921             | 1919                          | 1920             | 1921             |
| Albany, N. Y.         | 39               | 36    | 23    | 4                | 3                | 2                | 1                             | 1                | ( <sup>1</sup> ) |
| Amarillo, Tex.        | 185              | 147   | 113   | 1                | 1                | 1                | 122                           | 90               | 84               |
| Atlanta, Ga.          | 18               | 21    | 29    | 11               | 15               | 18               | 4                             | 1                | 3                |
| Augusta, Ga.          | 14               | 13    | 12    | 9                | 8                | 8                | 2                             | 2                | 2                |
| Baltimore, Md.        | 249              | 287   | 279   | 145              | 170              | 156              | 5                             | 5                | 3                |
| Billings, Mont.       | 16               | 2     | —     | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 9                             | 1                | —                |
| Birmingham, Ala.      | 24               | 24    | 20    | 22               | 24               | 19               | 1                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Boston, Mass.         | 98               | 75    | 61    | —                | —                | —                | —                             | —                | —                |
| Buffalo, N. Y.        | 749              | 677   | 609   | 202              | 190              | 167              | 39                            | 14               | 8                |
| Chattanooga, Tenn.    | 12               | 13    | 15    | 10               | 10               | 11               | 2                             | 2                | 4                |
| Cheyenne, Wyo.        | 47               | 23    | 9     | —                | —                | —                | —                             | —                | —                |
| Chicago, Ill.         | 4,253            | 3,519 | 3,540 | 3,032            | 2,603            | 2,377            | 509                           | 418              | 332              |
| Cincinnati, Ohio.     | 460              | 441   | 454   | 305              | 253              | 302              | 28                            | 25               | 22               |
| Cleveland, Ohio.      | 305              | 281   | 248   | 244              | 228              | 228              | 6                             | 3                | 6                |
| Columbia, S. C.       | 7                | 6     | 5     | 6                | 6                | 5                | 1                             | —                | —                |
| Columbus, Ohio.       | 3                | 2     | 3     | ( <sup>1</sup> ) | 1                | 1                | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Dallas, Tex.          | 9                | 8     | 8     | 9                | 8                | 8                | —                             | —                | —                |
| Dayton, Ohio.         | 31               | 33    | 31    | 25               | 26               | 27               | ( <sup>1</sup> )              | 1                | —                |
| Denver, Colo.         | 824              | 617   | 482   | 174              | 153              | 122              | 483                           | 407              | 274              |
| Detroit, Mich.        | 227              | 234   | 201   | 189              | 202              | 168              | 17                            | 16               | 14               |
| Dublin, Ga.           | 2                | 4     | 3     | —                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| East St. Louis, Ill.  | 1,473            | 1,254 | 1,077 | 1,019            | 744              | 466              | 234                           | 168              | 185              |
| El Paso, Tex.         | 203              | 152   | 170   | 24               | 21               | 24               | 131                           | 115              | 102              |
| Emeryville, Calif.    | 36               | 38    | 35    | 36               | 38               | 35               | ( <sup>1</sup> )              | —                | —                |
| Erie, Pa.             | 38               | 26    | —     | 13               | 9                | —                | —                             | —                | —                |
| Evansville, Ind.      | 38               | 45    | 35    | 16               | 24               | 21               | 1                             | 1                | 1                |
| Fort Worth, Tex.      | 1,267            | 1,134 | 984   | 715              | 683              | 576              | 327                           | 278              | 172              |
| Fostoria, Ohio.       | 11               | 14    | 11    | 2                | 3                | 2                | 5                             | 5                | 3                |
| Indianapolis, Ind.    | 515              | 597   | 483   | 245              | 257              | 230              | 50                            | 48               | 41               |
| Jacksonville, Fla.    | 16               | 7     | 6     | 16               | 6                | 3                | ( <sup>1</sup> )              | ( <sup>1</sup> ) | —                |
| Jersey City, N. J.    | 745              | 533   | 844   | 745              | 533              | 843              | —                             | —                | —                |
| Kansas City, Mo.      | 3,085            | 2,500 | 2,499 | 1,617            | 1,284            | 1,260            | 1,036                         | 778              | 733              |
| Knoxville, Tenn.      | 21               | 11    | 13    | 9                | 11               | 10               | 3                             | 4                | 3                |
| Lafayette, Ind.       | 17               | 19    | 18    | 7                | 8                | 9                | 2                             | 1                | 1                |
| Lancaster, Pa.        | 239              | 287   | 205   | 45               | 55               | 37               | 95                            | 87               | 1                |
| Logansport, Ind.      | 1                | 1     | 1     | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Louisville, Ky.       | 246              | 245   | 248   | 87               | 87               | 81               | 36                            | 30               | 37               |
| Marion, Ohio.         | 13               | 32    | 7     | 1                | 1                | 1                | 1                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Memphis, Tenn.        | 6                | 19    | 8     | 1                | ( <sup>1</sup> ) | 5                | ( <sup>1</sup> )              | 2                | 1                |
| Milwaukee, Wis.       | 398              | 444   | 439   | 334              | 390              | 402              | 16                            | 15               | 12               |
| Montgomery, Ala.      | 52               | 68    | 50    | 3                | 4                | 3                | 9                             | 23               | 10               |
| Moultrie, Ga.         | —                | —     | 4     | —                | —                | 1                | —                             | —                | ( <sup>1</sup> ) |
| Nashville, Tenn.      | 83               | 99    | 96    | 41               | 46               | 42               | 11                            | 14               | 12               |
| Nebraska City, Nebr.  | 2                | 2     | 1     | ( <sup>1</sup> ) | —                | —                | 1                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| New Brighton, Minn.   | 121              | 73    | 36    | —                | —                | ( <sup>1</sup> ) | 1                             | 1                | ( <sup>1</sup> ) |
| New Orleans, La.      | 191              | 213   | 188   | 163              | 174              | 160              | 18                            | 17               | 15               |
| New York, N. Y.       | 402              | 316   | 301   | 399              | 315              | 300              | —                             | —                | —                |
| Ogden, Utah.          | 104              | 64    | 76    | 11               | 16               | 13               | 48                            | 28               | 26               |
| Oklahoma, Okla.       | 593              | 400   | 315   | 368              | 228              | 203              | 126                           | 106              | 80               |
| Omaha, Nebr.          | 1,475            | 1,603 | 1,435 | 1,136            | 914              | 797              | 656                           | 451              | 443              |
| Orangeburg, S. C.     | ( <sup>1</sup> ) | —     | —     | ( <sup>1</sup> ) | —                | —                | —                             | —                | —                |
| Pasco, Wash.          | 6                | 8     | 3     | ( <sup>1</sup> ) | ( <sup>1</sup> ) | —                | —                             | ( <sup>1</sup> ) | —                |
| Peoria, Ill.          | 27               | 37    | 43    | 18               | 18               | 21               | ( <sup>1</sup> )              | 1                | 4                |
| Philadelphia, Pa.     | 301              | 227   | 227   | 195              | 221              | 225              | —                             | —                | —                |
| Pittsburgh, Pa.       | 616              | 738   | 745   | 451              | 471              | 475              | —                             | —                | —                |
| Portland, Oreg.       | 125              | 141   | 120   | 62               | 70               | 59               | 21                            | 26               | 9                |
| Pueblo, Colo.         | 217              | 178   | 79    | —                | —                | 1                | 7                             | 5                | 4                |
| Richmond, Va.         | 29               | 30    | 28    | 17               | 18               | 20               | 2                             | 2                | 2                |
| St. Joseph, Mo.       | 760              | 643   | 558   | 531              | 410              | 370              | 124                           | 103              | 103              |
| St. Paul, Minn.       | 1,491            | 1,373 | 936   | 820              | 710              | 584              | 416                           | 346              | 270              |
| Salt Lake City, Utah. | 67               | 49    | 87    | 19               | 14               | 25               | 25                            | 16               | 12               |
| San Antonio, Tex.     | 250              | 233   | 151   | 14               | 37               | 36               | 133                           | 98               | 26               |
| Seattle, Wash.        | 66               | 58    | 47    | 56               | 48               | 48               | ( <sup>1</sup> )              | —                | ( <sup>1</sup> ) |
| Sioux City, Iowa.     | 314              | 732   | 630   | 343              | 342              | 273              | 329                           | 333              | 240              |
| Sioux Falls, S. Dak.  | 8                | 14    | 17    | 1                | 6                | 7                | 1                             | 1                | 5                |

<sup>1</sup> Less than 500.

## CATTLE—Continued.

TABLE 315.—*Cattle and calves: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919–1921—Continued.*

[In thousands—i. e., 000 omitted.]

| Stockyards.           | Receipts. |        |        | Local slaughter. |        |        | Stocker and feeder shipments. |                  |                  |
|-----------------------|-----------|--------|--------|------------------|--------|--------|-------------------------------|------------------|------------------|
|                       | 1919      | 1920   | 1921   | 1919             | 1920   | 1921   | 1919                          | 1920             | 1921             |
| Spokane, Wash.....    | 74        | 67     | 41     | 36               | 35     | 23     | 28                            | 23               | 7                |
| Tacoma, Wash.....     | 29        | 22     | 25     | 24               | 22     | 25     | 3                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Toledo, Ohio.....     | 57        | 64     | 25     | 13               | 18     | 14     | 4                             | 5                | 4                |
| Washington, D. C..... | 23        | 27     | 28     | 20               | 25     | 27     | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Wichita, Kans.....    | 311       | 242    | 285    | 133              | 84     | 83     | 116                           | 104              | 132              |
| Total.....            | 24,624    | 22,197 | 19,787 | 13,633           | 12,194 | 11,078 | 5,286                         | 4,102            | 3,504            |

<sup>1</sup> Less than 500.TABLE 316.—*Cattle and calves: Monthly and yearly stocker and feeder shipments from all public stockyards, 1916–1921.*

[In thousands—i. e., 000 omitted.]

| Year.                  | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|------------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|--------|
| 1916 <sup>1</sup> .... | 221  | 197  | 250  | 262  | 289  | 264   | 171   | 330  | 464   | 682  | 461  | 256  | 3,847  |
| 1917.....              | 260  | 213  | 249  | 306  | 401  | 353   | 262   | 330  | 588   | 768  | 729  | 344  | 4,808  |
| 1918.....              | 222  | 214  | 319  | 355  | 491  | 393   | 274   | 418  | 604   | 704  | 623  | 366  | 5,013  |
| 1919.....              | 364  | 264  | 277  | 391  | 442  | 272   | 236   | 397  | 611   | 839  | 723  | 470  | 5,286  |
| 1920.....              | 349  | 240  | 241  | 244  | 323  | 272   | 218   | 314  | 488   | 580  | 553  | 280  | 4,102  |
| 1921.....              | 205  | 166  | 236  | 238  | 214  | 209   | 122   | 355  | 395   | 622  | 497  | 245  | 3,504  |

<sup>1</sup> Complete information for 1916 not obtainable from many markets.TABLE 317.—*Cattle and calves: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921.*

[In thousands—i. e., 000 omitted.]

| Stockyards.                       | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|-----------------------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|--------|
| Chicago, Ill.:                    |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 353  | 243  | 315  | 300  | 284  | 313   | 225   | 282  | 298   | 333  | 321  | 273  | 3,540  |
| Local slaughter.....              | 233  | 150  | 215  | 198  | 192  | 225   | 168   | 194  | 203   | 230  | 203  | 166  | 2,377  |
| Stocker and feeder shipments..... | 23   | 22   | 31   | 23   | 17   | 18    | 6     | 27   | 32    | 52   | 51   | 30   | 332    |
| Kansas City, Mo.:                 |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 168  | 125  | 170  | 141  | 167  | 154   | 155   | 310  | 309   | 337  | 234  | 150  | 2,469  |
| Local slaughter.....              | 94   | 72   | 92   | 85   | 92   | 97    | 99    | 129  | 126   | 133  | 107  | 69   | 1,200  |
| Stocker and feeder shipments..... | 40   | 39   | 57   | 42   | 39   | 38    | 20    | 99   | 102   | 167  | 100  | 45   | 783    |
| Omaha, Nebr.:                     |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 136  | 98   | 130  | 108  | 104  | 122   | 84    | 180  | 145   | 169  | 115  | 74   | 1,435  |
| Local slaughter.....              | 92   | 60   | 83   | 69   | 72   | 83    | 56    | 75   | 58    | 69   | 52   | 28   | 797    |
| Stocker and feeder shipments..... | 25   | 20   | 28   | 15   | 12   | 15    | 14    | 64   | 78    | 90   | 53   | 28   | 443    |
| East St. Louis, Ill.:             |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 87   | 54   | 64   | 59   | 70   | 87    | 78    | 121  | 114   | 130  | 125  | 88   | 1,077  |
| Local slaughter.....              | 54   | 30   | 30   | 27   | 24   | 38    | 37    | 50   | 43    | 43   | 45   | 30   | 466    |
| Stocker and feeder shipments..... | 10   | 8    | 10   | 9    | 7    | 11    | 5     | 20   | 20    | 34   | 35   | 16   | 185    |
| St. Paul, Minn.:                  |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 72   | 59   | 89   | 64   | 70   | 71    | 52    | 88   | 88    | 134  | 131  | 67   | 935    |
| Local slaughter.....              | 50   | 44   | 52   | 41   | 47   | 49    | 33    | 43   | 42    | 59   | 65   | 39   | 564    |
| Stocker and feeder shipments..... | 9    | 8    | 18   | 16   | 13   | 12    | 9     | 32   | 32    | 50   | 50   | 21   | 270    |
| Fort Worth, Tex.:                 |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 80   | 35   | 43   | 54   | 79   | 76    | 87    | 132  | 121   | 131  | 110  | 56   | 984    |
| Local slaughter.....              | 31   | 19   | 21   | 22   | 31   | 67    | 59    | 79   | 77    | 78   | 60   | 32   | 576    |
| Stocker and feeder shipments..... | 13   | 8    | 13   | 23   | 19   | 7     | 5     | 14   | 13    | 25   | 22   | 10   | 172    |
| Sioux City, Iowa:                 |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.....                     | 65   | 43   | 66   | 45   | 47   | 45    | 35    | 53   | 55    | 75   | 47   | 39   | 620    |
| Local slaughter.....              | 33   | 23   | 29   | 24   | 25   | 27    | 14    | 23   | 19    | 21   | 20   | 15   | 273    |
| Stocker and feeder shipments..... | 15   | 13   | 19   | 13   | 13   | 10    | 12    | 31   | 32    | 45   | 23   | 14   | 240    |

## CATTLE—Continued.

TABLE 317.—Cattle and calves: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921—Continued.

[In thousands—1. e., 000 omitted.]

| Stockyards.                       | Jan.             | Feb.             | Mar.             | Apr.             | May.             | June.            | July.            | Aug.             | Sept. | Oct. | Nov. | Dec.             | Total. |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------|------|------|------------------|--------|
| <b>Jersey City, N. J.:</b>        |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 66               | 68               | 70               | 77               | 75               | 71               | 64               | 74               | 76    | 85   | 60   | 58               | 844    |
| Local slaughter.....              | 66               | 68               | 70               | 77               | 74               | 71               | 64               | 74               | 76    | 85   | 60   | 58               | 843    |
| <b>St. Joseph, Mo.:</b>           |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 54               | 44               | 48               | 37               | 38               | 41               | 35               | 52               | 56    | 61   | 47   | 45               | 558    |
| Local slaughter.....              | 34               | 27               | 31               | 26               | 26               | 31               | 27               | 33               | 37    | 36   | 30   | 32               | 370    |
| Stocker and feeder shipments..... | 5                | 6                | 7                | 4                | 5                | 3                | 3                | 14               | 14    | 21   | 13   | 8                | 103    |
| <b>Indianapolis, Ind.:</b>        |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 46               | 33               | 41               | 42               | 40               | 45               | 38               | 46               | 41    | 40   | 35   | 36               | 453    |
| Local slaughter.....              | 22               | 14               | 20               | 20               | 19               | 22               | 19               | 20               | 18    | 18   | 13   | 20               | 230    |
| Stocker and feeder shipments..... | 3                | 2                | 1                | 2                | 2                | 3                | 2                | 4                | 5     | 8    | 7    | 2                | 41     |
| <b>Buffalo, N. Y.:</b>            |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 51               | 40               | 53               | 58               | 62               | 52               | 43               | 47               | 46    | 56   | 48   | 53               | 609    |
| Local slaughter.....              | 14               | 10               | 16               | 16               | 18               | 15               | 12               | 16               | 12    | 15   | 12   | 11               | 167    |
| Stocker and feeder shipments..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                | 1     | 2    | 2    | ( <sup>1</sup> ) | 8      |
| <b>Pittsburgh, Pa.:</b>           |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 60               | 41               | 44               | 52               | 50               | 57               | 63               | 70               | 75    | 89   | 76   | 74               | 745    |
| Local slaughter.....              | 14               | 12               | 15               | 15               | 17               | 16               | 15               | 14               | 19    | 15   | 11   | 12               | 175    |
| <b>Denver, Colo.:</b>             |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 39               | 21               | 25               | 21               | 41               | 46               | 32               | 24               | 33    | 76   | 85   | 39               | 462    |
| Local slaughter.....              | 13               | 9                | 12               | 9                | 11               | 11               | 10               | 11               | 11    | 10   | 10   | 5                | 122    |
| Stocker and feeder shipments..... | 19               | 10               | 5                | 5                | 23               | 32               | 22               | 6                | 16    | 46   | 60   | 30               | 274    |
| <b>Cincinnati, Ohio:</b>          |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 30               | 23               | 35               | 38               | 37               | 39               | 41               | 46               | 45    | 46   | 39   | 35               | 454    |
| Local slaughter.....              | 23               | 18               | 25               | 28               | 28               | 28               | 25               | 28               | 25    | 27   | 22   | 22               | 302    |
| Stocker and feeder shipments..... | 1                | 1                | 3                | 2                | 2                | 1                | 1                | 2                | 2     | 3    | 2    | 2                | 22     |
| <b>Oklahoma, Okla.:</b>           |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 29               | 19               | 28               | 19               | 22               | 20               | 20               | 33               | 33    | 38   | 28   | 21               | 315    |
| Local slaughter.....              | 18               | 15               | 16               | 11               | 12               | 14               | 16               | 23               | 23    | 22   | 19   | 14               | 203    |
| Stocker and feeder shipments..... | 5                | 4                | 9                | 7                | 6                | 4                | 3                | 9                | 9     | 12   | 10   | 2                | 80     |
| <b>Cleveland, Ohio:</b>           |                  |                  |                  |                  |                  |                  |                  |                  |       |      |      |                  |        |
| Receipts.....                     | 20               | 16               | 20               | 23               | 22               | 25               | 20               | 22               | 20    | 20   | 20   | 20               | 248    |
| Local slaughter.....              | 19               | 16               | 19               | 21               | 20               | 22               | 19               | 19               | 18    | 18   | 19   | 18               | 228    |
| Stocker and feeder shipments..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                | 1                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1     | 1    | 1    | ( <sup>1</sup> ) | 6      |

<sup>1</sup> Less than 500.

TABLE 318.—Beef, fresh, chilled, and frozen: Yearly exports and imports, by principal countries.

[In thousands of pounds—1. e., 000 omitted.]

## EXPORTS.

| Country.                  | 1910    | 1911    | 1912    | 1913    | 1914    | 1915    | 1916    | 1917    | 1918      | 1919             | 1920             |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|------------------|------------------|
| <b>Exported by—</b>       |         |         |         |         |         |         |         |         |           |                  |                  |
| Argentina.....            | 559,325 | 639,674 | 755,849 | 807,388 | 813,427 | 799,694 | 942,907 | 870,458 | 1,092,631 | 883,452          | ( <sup>1</sup> ) |
| Australia.....            | 109,428 | 108,786 | 142,210 | 218,919 | 292,066 | 114,678 | 242,032 | 180,249 | 119,990   | 121,079          | ( <sup>1</sup> ) |
| Brazil.....               |         |         |         |         |         | 18,770  | 74,209  | 146,500 | 133,397   | 113,831          | 134,255          |
| British South Africa..... | 37      | 240     | 312     | 165     | 488     | 5,986   | 17,687  | 47,256  | 13,656    | 44,409           | 12,662           |
| Canada.....               |         |         | 1,013   | 12,034  | 17,837  | 29,460  | 45,936  | 84,376  | 126,334   | 107,170          | 64,412           |
| Denmark.....              | 38,854  | 27,466  | 57,653  | 33,241  | 38,089  | 50,181  | 34,220  | 35,370  | 21,337    | 17,730           | 35,669           |
| France.....               | 6,834   | 6,789   | 7,292   | 12,212  | 5,715   | * 1,626 | * 2,177 | 2,056   | 1,547     | 3,065            | 12,016           |
| Netherlands.....          | 34,778  | 32,930  | 40,854  | 40,328  | 32,895  | 45,646  | 33,382  | 3,741   | 54        | 35,649           | 5,416            |
| New Zealand.....          | 57,088  | 27,307  | 30,808  | 30,636  | 69,327  | 86,477  | 112,071 | 99,740  | 82,305    | 87,433           | 84,595           |
| Sweden.....               | 3,731   | 19,720  | 17,606  | 8,604   | 12,230  | 16,521  | 7,186   | 6,148   | 10        | 3,693            | 4,662            |
| United States.....        | 55,539  | 28,783  | 9,026   | 6,850   | 31,422  | 262,513 | 151,977 | 216,420 | 514,342   | 174,427          | 89,649           |
| Uruguay.....              | 20,719  | 16,933  | 44,847  | 109,268 | 153,016 | 215,115 | 157,568 | 158,398 | 106,247   | ( <sup>1</sup> ) | ( <sup>1</sup> ) |

<sup>1</sup> Not yet available.

\* Year beginning July 1.

\* Unclassified.

\* Includes some "other than beef."



## CATTLE—Continued.

TABLE 318.—Beef, fresh, chilled, and frozen: Yearly exports and imports, by principal countries—Continued.

## IMPORTS.

| Country.                  | 1910    | 1911    | 1912    | 1913      | 1914    | 1915    | 1916    | 1917    | 1918    | 1919    | 1920             |
|---------------------------|---------|---------|---------|-----------|---------|---------|---------|---------|---------|---------|------------------|
| <i>Imported by—</i>       |         |         |         |           |         |         |         |         |         |         |                  |
| Austria-Hungary.....      | 95      | 10,465  | 3,374   | 158       |         |         |         |         |         |         | 43,026           |
| British South Africa..... | 1,150   | 8,246   | 6,154   | 5,043     | 1,504   | 35      | 12      | 17      | 4       | 4       | 89               |
| Canada.....               | 1,812   | 874     | 198     | 4,450     | 2,279   | 1,916   | 4,228   | 14,663  | 2,233   | 1,460   | 2,368            |
| Cuba.....                 | 111     | 48      | 52      | 76        | 136     | 34      | 17      | 65      | 147     | 557     | ( <sup>1</sup> ) |
| Denmark.....              | 195     | 1,164   | 988     | 415       | 1,387   | 1,297   |         |         |         |         |                  |
| France.....               | 3,074   | 5,522   | 5,250   | 5,098     | 33,747  | 381,614 | 460,763 | 414,366 | 458,495 | 526,101 | 293,617          |
| Germany.....              | 34,994  | 39,734  | 79,114  | 66,746    |         |         |         |         |         |         | 143,471          |
| Netherlands.....          | 274     | 348     | 2,317   | 7,413     | 3,768   | 1,083   | 85      | 5       | 12      | 35,962  | 14,902           |
| Sweden.....               | 791     | 843     | 1,157   | 1,442     | 453     | 52      | 82      | 291     | 10,755  |         |                  |
| Switzerland.....          | 3,243   | 5,371   | 5,653   | 4,472     | 2,109   | 472     | 1,276   | 583     | 3       | 126     | 826              |
| United Kingdom.....       | 785,736 | 824,443 | 896,652 | 1,030,771 | 990,591 | 963,389 | 789,826 | 681,796 | 844,055 | 721,274 | 1,027,106        |
| United States.....        |         |         |         | 35,822    | 254,319 | 118,590 | 39,772  | 22,072  | 23,339  | 38,462  | 50,182           |

<sup>1</sup> Not yet available.<sup>2</sup> Classified as "Beef" for Austria only.

## HIDES.

TABLE 319.—Hides: Monthly and yearly average price per pound, heavy native steers, at Chicago, 1910-1921.

## PACKER HIDES.

| Year.               | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Average. |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910.....           | \$0.17 | \$0.15 | \$0.14 | \$0.15 | \$0.16 | \$0.18 | \$0.16 | \$0.16 | \$0.16 | \$0.16 | \$0.15 | \$0.14 | \$0.16   |
| 1911.....           | .13    | .13    | .13    | .13    | .14    | .16    | .16    | .16    | .16    | .16    | .16    | .16    | .15      |
| 1912.....           | .16    | .16    | .16    | .16    | .17    | .17    | .18    | .19    | .20    | .20    | .20    | .19    | .18      |
| 1913.....           | .19    | .18    | .17    | .17    | .17    | .18    | .18    | .19    | .19    | .20    | .20    | .18    | .18      |
| 1914.....           | .18    | .18    | .18    | .18    | .18    | .19    | .20    | .21    | .21    | .21    | .22    | .23    | .20      |
| 1915.....           | .23    | .23    | .21    | .19    | .22    | .24    | .26    | .27    | .26    | .26    | .26    | .25    | .24      |
| 1916.....           | .23    | .23    | .22    | .23    | .26    | .27    | .27    | .26    | .26    | .28    | .32    | .32    | .26      |
| 1917.....           | .32    | .31    | .30    | .30    | .32    | .32    | .32    | .32    | .33    | .34    | .35    | .35    | .32      |
| 1918.....           | .32    | .29    | .26    | .27    | .31    | .33    | .33    | .30    | .30    | .30    | .29    | .29    | .30      |
| 1919.....           | .28    | .28    | .28    | .31    | .37    | .41    | .50    | .53    | .46    | .48    | .47    | .40    | .40      |
| 1920.....           | .40    | .40    | .37    | .36    | .36    | .36    | .31    | .28    | .28    | .26    | .22    | .20    | .32      |
| 1921.....           | .17    | .15    | .13    | .11    | .12    | .14    | .14    | .14    | .14    | .15    | .16    | .16    | .14      |
| 12-year average.... | .23    | .22    | .21    | .21    | .23    | .25    | .25    | .25    | .25    | .25    | .25    | .24    | .24      |

## COUNTRY HIDES.

| Year.               | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Average. |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910.....           | \$0.14 | \$0.13 | \$0.12 | \$0.13 | \$0.12 | \$0.12 | \$0.11 | \$0.12 | \$0.13 | \$0.12 | \$0.12 | \$0.11 | \$0.12   |
| 1911.....           | .11    | .11    | .11    | .11    | .11    | .12    | .13    | .13    | .13    | .13    | .14    | .13    | .12      |
| 1912.....           | .13    | .13    | .13    | .13    | .14    | .14    | .14    | .15    | .16    | .16    | .16    | .16    | .14      |
| 1913.....           | .15    | .15    | .15    | .15    | .14    | .14    | .15    | .15    | .16    | .17    | .17    | .16    | .15      |
| 1914.....           | .16    | .16    | .16    | .15    | .17    | .16    | .16    | .16    | .17    | .17    | .19    | .20    | .17      |
| 1915.....           | .20    | .20    | .18    | .17    | .17    | .18    | .21    | .20    | .20    | .22    | .21    | .20    | .20      |
| 1916.....           | .18    | .19    | .18    | .19    | .20    | .20    | .21    | .21    | .21    | .23    | .27    | .26    | .21      |
| 1917.....           | .24    | .24    | .24    | .24    | .25    | .26    | .26    | .27    | .24    | .28    | .29    | .26    | .26      |
| 1918.....           | .23    | .21    | .17    | .19    | .28    | .28    | .28    | .24    | .24    | .24    | .22    | .22    | .23      |
| 1919.....           | .22    | .22    | .22    | .24    | .28    | .34    | .43    | .47    | .41    | .38    | .36    | .28    | .32      |
| 1920.....           | .33    | .33    | .30    | .28    | .28    | .24    | .23    | .20    | .19    | .18    | .16    | .14    | .24      |
| 1921.....           | .13    | .11    | .10    | .09    | .09    | .09    | .08    | .08    | .08    | .09    | .10    | .10    | .09      |
| 12-year average.... | .18    | .18    | .17    | .17    | .19    | .19    | .20    | .20    | .19    | .20    | .20    | .18    | .19      |

Compiled from data in "Hide and Leather."

MILK.

TABLE 320.—Milk: Monthly wholesale price, cents per quart, in cases of 12 quarts.

[Standard or grade B milk.]

| City and year.   | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Average. |
|------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|----------|
| Boston:          |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 15   | 15   | 15   | 15   | 14   | 14    | 15    | 15   | 16    | 16   | 16   | 16   | 15       |
| 1921.....        | 16   | 15   | 14   | 14   | 14   | 14    | 14    | 14   | 14    | 14   | 14   | 14   | 14       |
| New York:        |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 18   | 16   | 16   | 15   | 15   | 15    | 15    | 17   | 18    | 18   | 18   | 17   | 17       |
| 1921.....        | 17   | 16   | 15   | 15   |      |       | 14    | 14   | 14    | 14   | 14   | 14   | 15       |
| Philadelphia:    |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 13   | 13   | 13   | 13   | 13   | 13    | 13    | 14   | 14    | 15   | 14   | 12   | 13       |
| 1921.....        | 12   | 12   |      |      | 10   | 10    | 10    | 10   | 10    | 10   | 10   | 10   | 10       |
| Pittsburgh:      |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 16   | 15   | 15   | 14   | 14   | 14    | 14    | 16   | 16    | 16   | 16   | 16   | 15       |
| 1921.....        | 15   | 15   | 14   | 14   | 14   | 14    | 14    | 14   | 14    | 14   | 14   | 12   | 14       |
| Washington:      |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 16   | 15   | 16   | 15   | 14   | 14    | 14    | 14   | 14    | 15   | 16   | 16   | 15       |
| 1921.....        | 14   | 13   | 14   | 14   | 11   | 11    |       |      | 11    | 12   | 12   | 12   | 12       |
| Atlanta:         |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 18   | 18   | 18   | 18   |      |       |       |      | 25    |      |      |      | 19       |
| 1921.....        |      | 15   |      |      |      |       | 14    |      | 11    | 14   | 14   |      | 14       |
| Jacksonville:    |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 17   | 17   |      | 13   | 18   |       | 22    | 22   | 22    | 18   | 18   | 18   | 19       |
| 1921.....        |      | 15   | 15   |      |      | 16    |       | 16   | 14    | 16   | 16   | 16   | 16       |
| New Orleans:     |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 17   | 17   | 17   | 17   | 15   | 15    | 15    | 15   | 17    | 17   | 17   | 16   | 16       |
| 1921.....        | 15   | 15   | 14   | 14   | 14   | 14    | 14    | 14   | 14    | 14   | 12   | 12   | 14       |
| St. Louis:       |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 15   | 15   | 15   |      | 14   |       | 14    | 15   | 15    | 15   | 15   | 15   | 15       |
| 1921.....        | 15   | 14   | 13   | 12   |      | 11    | 11    | 11   | 11    | 11   | 11   |      | 12       |
| Kansas City:     |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 14   | 14   | 14   | 14   | 14   | 14    | 14    | 14   | 14    | 14   | 14   | 14   | 14       |
| 1921.....        | 12   | 13   | 12   | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 13   | 11   | 12       |
| Chicago:         |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 14   | 14   | 14   | 14   | 14   | 14    | 14    | 16   | 16    | 16   | 14   | 14   | 14       |
| 1921.....        | 14   | 14   | 14   | 13   | 13   | 13    | 13    | 12   | 12    | 12   | 12   | 12   | 13       |
| Detroit:         |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 15   | 15   | 15   | 15   | 14   | 14    | 15    | 15   | 15    | 15   | 15   | 13   | 15       |
| 1921.....        | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12   | 12       |
| Cleveland:       |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 14   | 14   | 14   | 14   | 14   | 14    | 14    | 14   | 14    | 14   | 14   | 14   | 14       |
| 1921.....        | 14   | 12   | 12   | 13   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 11   | 12       |
| Milwaukee:       |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 12   | 12   | 11   | 11   | 11   | 11    | 12    | 12   | 12    | 12   | 10   | 10   | 11       |
| 1921.....        |      | 8    | 8    | 8    | 8    | 8     | 7     | 8    | 8     | 8    | 8    | 8    | 8        |
| Minneapolis:     |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12   | 12       |
| 1921.....        | 12   | 11   | 10   | 10   | 10   | 8     | 8     | 10   | 10    |      | 10   | 9    | 10       |
| St. Paul:        |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 12   | 12   | 12   | 12   | 12   |       | 12    | 12   | 12    | 12   | 12   | 12   | 12       |
| 1921.....        | 12   | 12   | 10   | 10   | 10   | 8     |       | 10   |       | 10   | 10   | 10   | 10       |
| Denver:          |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 12   | 12   | 12   | 12   |      | 11    | 12    | 11   | 11    | 11   | 11   | 11   | 11       |
| 1921.....        |      | 13   |      | 10   | 9    | 9     | 8     | 9    | 8     | 8    | 8    | 8    | 9        |
| Dallas:          |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        |      |      | 20   | 18   |      |       |       |      |       |      |      |      | 12       |
| 1921.....        |      | 15   | 13   |      | 13   |       | 10    |      | 10    |      |      | 12   | 12       |
| Los Angeles:     |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 15   | 15   | 15   | 15   | 15   | 15    | 17    | 17   |       | 17   | 17   | 17   | 16       |
| 1921.....        | 17   | 15   | 15   | 15   | 15   | 15    | 14    | 14   | 14    | 13   | 13   | 13   | 14       |
| San Francisco:   |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 14   | 14   | 14   | 14   | 14   | 14    | 14    | 14   | 14    | 14   | 14   | 15   | 14       |
| 1921.....        | 13   | 13   | 13   | 12   | 12   | 12    | 12    | 11   | 11    | 11   | 11   | 11   | 12       |
| Portland, Oreg.: |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 14   | 14   | 14   | 12   | 12   | 12    | 12    | 13   | 13    | 14   | 13   | 13   | 13       |
| 1921.....        | 12   | 12   | 12   |      |      |       | 9     | 8    | 9     | 9    | 9    | 9    | 10       |
| Seattle:         |      |      |      |      |      |       |       |      |       |      |      |      |          |
| 1920.....        | 12   | 11   | 10   | 9    | 9    | 10    | 11    | 11   | 11    | 10   | 8    | 8    | 11       |
| 1921.....        | 9    | 8    | 9    | 9    | 8    |       |       | 8    |       | 8    | 8    | 8    | 8        |

## MILK—Continued.

TABLE 321.—Milk: Monthly retail price, in cents per quart, delivered to family trade cities.

[Standard or grade B milk.]

| City and year.           | Jan.  | Feb. | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Average. |
|--------------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <b>Boston:</b>           |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 17    | 17   | 17    | 17    | 16    | 16    | 17    | 18    | 18    | 18    | 18    | 18    | 17       |
| 1921.....                | 17    | 16   | 16    | 16    | 15    | 15    | 15    | 16    | 16    | 15    | 15    | 15    | 16       |
| <b>New York:</b>         |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 18    | 17   | 17    | 15    | 15    | 15    | 16    | 17    | 18    | 18    | 18    | 17    | 17       |
| 1921.....                | 17    | 16   | 15    | 15    | ..... | 14    | 14    | 15    | 15    | 15    | 15    | 15    | 15       |
| <b>Philadelphia:</b>     |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 14    | 14   | 14    | 14    | 14    | 14    | 14    | 15    | 15    | 15    | 15    | 13    | 14       |
| 1921.....                | 13    | 13   | 12    | 13    | 11    | 11    | 11    | 11    | 11    | 11    | 11    | 11    | 12       |
| <b>Pittsburgh:</b>       |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 15    | 15    | 15    | 15    | 16    | 16    | 16    | 16    | 16    | 16       |
| 1921.....                | 15    | 15   | 14    | 14    | 14    | 14    | 14    | 14    | 14    | 14    | 14    | 13    | 14       |
| <b>Washington:</b>       |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 18    | 18   | 18    | 18    | 16    | 16    | 16    | 16    | 17    | 18    | 18    | 18    | 17       |
| 1921.....                | 16    | 15   | 16    | 16    | 13    | 14    | 14    | 14    | 14    | 15    | 15    | 15    | 15       |
| <b>Atlanta:</b>          |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 23    | 23   | ..... | ..... | 25    | 25    | 25    | 25    | 25    | 25    | ..... | ..... | 24       |
| 1921.....                | ..... | 20   | ..... | ..... | ..... | 20    | 18    | ..... | 18    | 18    | 18    | 18    | 19       |
| <b>Jacksonville:</b>     |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 20    | 20   | 20    | 20    | 20    | 20    | 25    | 25    | 25    | 24    | 23    | 23    | 22       |
| 1921.....                | ..... | 18   | 18    | ..... | ..... | 20    | ..... | 19    | 20    | 20    | 18    | 18    | 19       |
| <b>New Orleans:</b>      |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 19    | 19   | 19    | 19    | 17    | 17    | 17    | 17    | 19    | 19    | 19    | 18    | 18       |
| 1921.....                | 17    | 17   | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 14    | 14    | 16       |
| <b>St. Louis:</b>        |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 15    | 15    | 15    | 15    | 16    | 16    | 17    | 17    | 16    | 16       |
| 1921.....                | 16    | 15   | 14    | 14    | 14    | 13    | 13    | 13    | 13    | 13    | 13    | 10    | 13       |
| <b>Kansas City, Mo.:</b> |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 15    | 16       |
| 1921.....                | 14    | 14   | 14    | 14    | 14    | 13    | 14    | 14    | 14    | 14    | 14    | 14    | 14       |
| <b>Chicago:</b>          |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 15    | 15   | 14    | 14    | 14    | 14    | 15    | 16    | 16    | 16    | 15    | 14    | 15       |
| 1921.....                | 14    | 14   | 14    | 14    | 14    | 14    | 14    | 14    | 12    | 12    | 12    | 12    | 13       |
| <b>Detroit:</b>          |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 16    | 14    | 16       |
| 1921.....                | 13    | 13   | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13       |
| <b>Cleveland:</b>        |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 15    | 15    | 15    | 15    | 16    | 16    | 16    | 15    | 15    | 16       |
| 1921.....                | 15    | 14   | 14    | 14    | 14    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 14       |
| <b>Milwaukee:</b>        |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 13    | 13   | 12    | 12    | 12    | 12    | 13    | 13    | 13    | 13    | 11    | 11    | 12       |
| 1921.....                | ..... | 10   | 10    | 10    | 9     | 9     | 9     | 10    | 9     | 9     | 9     | 9     | 9        |
| <b>Minneapolis:</b>      |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 13    | 13   | 13    | 13    | 13    | 13    | 13    | 14    | 14    | 14    | 14    | 14    | 13       |
| 1921.....                | 13    | 12   | 12    | 12    | 11    | 10    | 10    | 11    | 11    | ..... | 11    | 10    | 11       |
| <b>St. Paul:</b>         |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 13    | 13   | 13    | 13    | 13    | 13    | 13    | 14    | 14    | 14    | 14    | 14    | 13       |
| 1921.....                | 13    | 13   | 12    | 12    | 11    | 10    | ..... | 11    | ..... | 11    | 11    | 10    | 11       |
| <b>Denver:</b>           |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 13    | 13   | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13    | 13       |
| 1921.....                | 13    | 13   | 13    | 13    | 12    | 11    | 11    | 11    | 11    | 10    | 10    | 10    | 11       |
| <b>Dallas:</b>           |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | ..... | 23   | 23    | 21    | 21    | 21    | 21    | 21    | 21    | 21    | 21    | 21    | 21       |
| 1921.....                | ..... | 19   | 17    | ..... | 15    | ..... | 15    | ..... | 15    | ..... | ..... | 15    | 16       |
| <b>Los Angeles:</b>      |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 16    | 16    | 16    | 18    | 18    | 18    | 18    | 18    | 18    | 17       |
| 1921.....                | 18    | 16   | 16    | 16    | ..... | 16    | 15    | 14    | 14    | 14    | 14    | 14    | 15       |
| <b>San Francisco:</b>    |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 16    | 16   | 16    | 16    | 16    | 16    | 16    | 17    | 17    | 17    | 17    | 17    | 16       |
| 1921.....                | 16    | 16   | 15    | 15    | 15    | 14    | 14    | 14    | 14    | 14    | 14    | 14    | 15       |
| <b>Portland, Oreg.:</b>  |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 15    | 15   | 15    | 13    | 13    | 13    | 14    | 14    | 14    | 14    | 15    | 15    | 14       |
| 1921.....                | 14    | 14   | 14    | ..... | ..... | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 13       |
| <b>Seattle:</b>          |       |      |       |       |       |       |       |       |       |       |       |       |          |
| 1920.....                | 15    | 15   | 14    | 12    | ..... | 13    | 14    | 14    | 14    | 14    | ..... | 13    | 14       |
| 1921.....                | 13    | 11   | 13    | 13    | 12    | ..... | ..... | 12    | ..... | 12    | 12    | 11    | 12       |

BUTTER.

TABLE 322.—Butter: Farm price, cents per pound, 1st of each month, 1909-1921.

| Year.     | Jan. | Feb. | Mar. | Apr. | May  | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------|------|------|------|------|------|------|------|------|-------|------|------|------|
| 1909..... |      | 25.1 | 24.5 | 24.2 | 24.0 | 22.5 | 21.9 | 22.4 | 23.3  | 25.0 | 26.2 | 27.4 |
| 1910..... | 28.7 | 27.9 | 26.3 | 25.8 | 25.5 | 24.1 | 23.3 | 23.8 | 25.2  | 26.2 | 27.1 | 27.8 |
| 1911..... | 27.8 | 24.1 | 22.7 | 22.6 | 21.4 | 20.3 | 20.4 | 21.7 | 23.1  | 23.8 | 25.2 | 27.4 |
| 1912..... | 28.1 | 29.0 | 27.2 | 26.1 | 26.0 | 24.8 | 23.4 | 23.7 | 24.2  | 25.6 | 26.9 | 28.8 |
| 1913..... | 28.4 | 27.6 | 27.5 | 27.6 | 27.0 | 25.5 | 24.7 | 24.9 | 25.9  | 27.5 | 28.2 | 29.2 |
| 1914..... | 29.2 | 27.4 | 26.0 | 24.9 | 23.8 | 22.8 | 22.9 | 23.7 | 25.3  | 26.0 | 26.3 | 28.4 |
| 1915..... | 28.7 | 27.9 | 26.8 | 25.8 | 25.7 | 24.8 | 24.2 | 24.2 | 24.5  | 25.3 | 26.4 | 27.6 |
| 1916..... | 28.3 | 27.6 | 27.1 | 27.6 | 27.9 | 26.5 | 25.7 | 26.1 | 27.4  | 29.0 | 31.1 | 34.4 |
| 1917..... | 34.0 | 33.5 | 34.1 | 33.5 | 36.1 | 35.0 | 33.5 | 34.0 | 36.1  | 38.9 | 40.9 | 41.9 |
| 1918..... | 43.1 | 43.7 | 43.4 | 40.7 | 39.9 | 38.6 | 38.2 | 39.7 | 41.4  | 47.2 | 49.7 | 52.7 |
| 1919..... | 54.9 | 49.6 | 43.8 | 47.6 | 50.3 | 49.1 | 47.2 | 48.2 | 49.7  | 51.5 | 56.0 | 60.0 |
| 1920..... | 61.3 | 57.8 | 55.9 | 56.1 | 57.6 | 58.5 | 51.6 | 52.0 | 52.3  | 54.1 | 54.3 | 54.7 |
| 1921..... | 49.0 | 45.0 | 42.1 | 40.4 | 38.6 | 29.4 | 29.0 | 34.1 | 36.6  | 38.2 | 40.9 | 41.1 |

TABLE 323.—Butter: Monthly average wholesale price of 92-score butter at five markets, 1918-1921.

[Cents per pound.]

| Year.          | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Average. |
|----------------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| New York:      |      |      |      |      |     |      |      |      |       |      |      |      |          |
| 1918.....      |      | 50   | 41   | 42   | 42  | 44   | 45   | 46   | 56    | 59   | 63   | 69   | 51       |
| 1919.....      | 62   | 52   | 62   | 64   | 58  | 52   | 53   | 55   | 59    | 68   | 71   | 72   | 61       |
| 1920.....      | 65   | 66   | 67   | 71   | 61  | 57   | 57   | 55   | 59    | 60   | 63   | 55   | 61       |
| 1921.....      | 52   | 47   | 48   | 46   | 32  | 33   | 40   | 43   | 43    | 47   | 45   | 44   | 43       |
| Chicago:       |      |      |      |      |     |      |      |      |       |      |      |      |          |
| 1918.....      |      |      | 41   | 42   | 42  | 42   | 43   | 45   | 55    | 56   | 62   | 67   | 50       |
| 1919.....      | 60   | 49   | 60   | 62   | 57  | 51   | 51   | 53   | 57    | 64   | 69   | 68   | 58       |
| 1920.....      | 63   | 63   | 66   | 64   | 57  | 55   | 55   | 54   | 57    | 57   | 60   | 51   | 58       |
| 1921.....      | 48   | 47   | 47   | 44   | 29  | 32   | 39   | 40   | 42    | 45   | 44   | 43   | 42       |
| Philadelphia:  |      |      |      |      |     |      |      |      |       |      |      |      |          |
| 1918.....      |      |      |      |      | 46  | 44   | 45   | 46   | 56    | 59   | 63   | 69   | 54       |
| 1919.....      | 62   | 52   | 62   | 65   | 59  | 53   | 54   | 56   | 59    | 68   | 70   | 73   | 61       |
| 1920.....      | 65   | 67   | 68   | 71   | 62  | 58   | 58   | 56   | 60    | 60   | 63   | 55   | 62       |
| 1921.....      | 53   | 48   | 49   | 47   | 33  | 33   | 40   | 43   | 43    | 47   | 45   | 45   | 44       |
| Boston:        |      |      |      |      |     |      |      |      |       |      |      |      |          |
| 1918.....      |      |      |      |      | 46  | 44   | 45   | 46   | 55    | 59   | 62   | 67   | 53       |
| 1919.....      | 63   | 51   | 62   | 65   | 69  | 53   | 53   | 56   | 58    | 64   | 69   | 71   | 61       |
| 1920.....      | 65   | 66   | 68   | 69   | 61  | 58   | 58   | 57   | 59    | 59   | 60   | 54   | 61       |
| 1921.....      | 52   | 48   | 48   | 46   | 32  | 34   | 41   | 43   | 43    | 46   | 45   | 44   | 44       |
| San Francisco: |      |      |      |      |     |      |      |      |       |      |      |      |          |
| 1918.....      |      |      |      |      |     |      |      |      |       | 59   | 58   | 62   | 60       |
| 1919.....      | 56   | 49   | 56   | 56   | 56  | 54   | 54   | 55   | 60    | 63   | 64   | 65   | 57       |
| 1920.....      | 62   | 62   | 59   | 56   | 53  | 54   | 57   | 59   | 64    | 58   | 53   | 43   | 57       |
| 1921.....      | 42   | 46   | 38   | 34   | 31  | 34   | 39   | 42   | 44    | 46   | 46   | 41   | 40       |

TABLE 324.—Butter: Monthly average wholesale price of 92-score creamery at New York, 1910 to 1921.

[Cents per pound.]

| Year.                | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Average. |
|----------------------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| 1910.....            | 33   | 30   | 33   | 31   | 28  | 28   | 28   | 29   | 30    | 30   | 31   | 33   | 30       |
| 1911.....            | 26   | 26   | 24   | 21   | 22  | 23   | 25   | 26   | 27    | 30   | 34   | 37   | 27       |
| 1912.....            | 39   | 32   | 31   | 33   | 30  | 27   | 27   | 27   | 30    | 31   | 34   | 37   | 32       |
| 1913.....            | 35   | 36   | 37   | 35   | 29  | 28   | 27   | 28   | 32    | 31   | 34   | 36   | 32       |
| 1914.....            | 33   | 29   | 28   | 25   | 26  | 27   | 28   | 30   | 31    | 32   | 35   | 34   | 30       |
| 1915.....            | 34   | 32   | 30   | 31   | 29  | 28   | 27   | 26   | 27    | 29   | 31   | 35   | 30       |
| 1916.....            | 33   | 34   | 37   | 36   | 31  | 30   | 29   | 31   | 34    | 35   | 39   | 40   | 34       |
| 1917.....            | 40   | 44   | 42   | 44   | 40  | 39   | 39   | 41   | 44    | 45   | 46   | 50   | 43       |
| 1918.....            | 52   | 50   | 44   | 42   | 42  | 44   | 45   | 46   | 55    | 53   | 63   | 69   | 51       |
| 1919.....            | 62   | 52   | 62   | 64   | 58  | 52   | 53   | 55   | 58    | 63   | 71   | 72   | 61       |
| 1920.....            | 65   | 66   | 67   | 71   | 61  | 57   | 57   | 55   | 59    | 60   | 63   | 55   | 61       |
| 1921.....            | 52   | 47   | 48   | 46   | 32  | 33   | 40   | 43   | 43    | 47   | 45   | 44   | 43       |
| 12-year average..... | 42   | 40   | 40   | 40   | 36  | 35   | 35   | 36   | 39    | 41   | 44   | 45   | 40       |

## BUTTER—Continued.

TABLE 325.—Butter: International trade, calendar years 1909–1920.

[Butter includes all butter made from milk, melted and renovated butter, but does not include margarine, coco butter, or ghee. See "General note," Table 290.]

| Country.                              | Average, 1909–1913.  |                      | 1918                 |                      | 1919                 |                      | 1920                 |                      |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                       | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             | Imports.             | Exports.             |
| <b>PRINCIPAL EXPORTING COUNTRIES.</b> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> | <i>1,000 pounds.</i> |
| Argentina.....                        | 113                  | 6,934                | ( <sup>1</sup> )     | 41,821               | 10                   | 44,881               | .....                | .....                |
| Australia.....                        | 46                   | 77,859               | 16                   | 41,115               | 37                   | 39,006               | .....                | .....                |
| Canada.....                           | 3,388                | 3,973                | 864                  | 10,919               | 1,464                | 16,509               | 1,105                | 13,361               |
| Denmark.....                          | 6,241                | 195,530              | ( <sup>1</sup> )     | 32,306               | 441                  | 80,622               | 6                    | 164,959              |
| Finland.....                          | 2,370                | 26,337               | 230                  | 1,048                | 11                   | 879                  | 5                    | 2,508                |
| France.....                           | 13,713               | 40,769               | 1,067                | 2,360                | 12,752               | 1,119                | 13,584               | 4,812                |
| Italy.....                            | 4,972                | 75,133               | 73                   | 109                  | 1,850                | 51                   | 3,104                | 90                   |
| Netherlands.....                      | 4,977                | 35,781               | 43                   | 5,415                | 615                  | 30,242               | 131                  | 45,576               |
| New Zealand.....                      | 47                   | 3,137                | ( <sup>1</sup> )     | 48,275               | 4                    | 35,732               | ( <sup>1</sup> )     | 34,945               |
| Norway.....                           | 2,202                | 180,204              | 2,498                | ( <sup>2</sup> )     | 8,201                | 2                    | 8,100                | 5                    |
| Russia.....                           | 2,202                | 45,870               | 11,426               | 3                    | 13,517               | 75                   | 18,941               | 53                   |
| Sweden.....                           | 330                  | 4,125                | 1,655                | 26,194               | 9,519                | 34,556               | 37,454               | 17,488               |
| United States.....                    | 1,647                | 4,125                | 1,655                | 26,194               | 9,519                | 34,556               | 37,454               | 17,488               |
| <b>PRINCIPAL IMPORTING COUNTRIES.</b> |                      |                      |                      |                      |                      |                      |                      |                      |
| Austria-Hungary.....                  | 6,281                | 4,267                | .....                | .....                | .....                | .....                | 2,829                | .....                |
| Belgium.....                          | 14,024               | 3,125                | .....                | .....                | 11,176               | 11                   | 18,468               | 127                  |
| Brazil.....                           | 4,551                | 2                    | 4                    | 173                  | 42                   | 563                  | 167                  | 10                   |
| British South Africa.....             | 4,025                | 38                   | 2,446                | 1,425                | 337                  | 567                  | 658                  | 629                  |
| Dutch East Indies.....                | 4,152                | .....                | 4,385                | .....                | 5,681                | .....                | .....                | .....                |
| Egypt.....                            | 2,350                | 1,166                | 302                  | 460                  | 602                  | 19                   | 391                  | 3                    |
| Germany.....                          | 111,441              | 498                  | .....                | 54                   | .....                | .....                | 17,227               | 429                  |
| Switzerland.....                      | 11,103               | .....                | .....                | .....                | 13,250               | ( <sup>1</sup> )     | 18,140               | 3                    |
| United Kingdom.....                   | 455,459              | 1,179                | 178,692              | 197                  | 174,568              | 262                  | 187,799              | 363                  |
| Other countries.....                  | 23,563               | 3,380                | 6,119                | 1,651                | 7,849                | 1,704                | 4,110                | 1,132                |
| <b>Total.....</b>                     | <b>674,014</b>       | <b>689,293</b>       | <b>207,874</b>       | <b>213,471</b>       | <b>261,806</b>       | <b>289,801</b>       | <b>333,219</b>       | <b>286,499</b>       |

<sup>1</sup> Less than 500 pounds.<sup>2</sup> Austria only, new boundaries.<sup>3</sup> Two-year average.

TABLE 326.—Butter: Monthly receipts at five markets, 1918 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

| Year.                   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Total.  |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| <b>New York:</b>        |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1918.....               |        |        | 15,750 | 14,325 | 17,550 | 27,900 | 25,875 | 20,250 | 15,600 | 18,375 | 13,125 | 13,725 | 182,475 |
| 1919.....               | 16,439 | 16,119 | 16,232 | 17,125 | 22,904 | 28,419 | 23,372 | 22,593 | 19,650 | 16,219 | 15,285 | 12,041 | 226,668 |
| 1920.....               | 11,794 | 11,201 | 12,973 | 7,845  | 13,383 | 20,205 | 21,534 | 18,203 | 14,914 | 12,076 | 10,436 | 10,042 | 164,608 |
| 1921.....               | 12,101 | 11,027 | 12,969 | 14,265 | 21,389 | 27,233 | 21,636 | 23,664 | 21,187 | 17,072 | 15,564 | 14,562 | 212,943 |
| <b>Chicago:</b>         |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1918.....               |        |        | 24,051 | 21,039 | 20,780 | 36,173 | 34,554 | 27,037 | 21,134 | 21,916 | 16,122 | 14,544 | 237,350 |
| 1919.....               | 12,324 | 10,177 | 11,458 | 12,891 | 23,168 | 33,373 | 24,627 | 18,556 | 13,156 | 10,758 | 7,722  | 7,569  | 185,779 |
| 1920.....               | 10,065 | 9,447  | 11,398 | 10,344 | 17,118 | 25,344 | 27,633 | 20,200 | 15,455 | 11,417 | 9,528  | 8,797  | 176,746 |
| 1921.....               | 10,054 | 9,908  | 12,195 | 14,513 | 21,785 | 28,571 | 21,551 | 21,290 | 14,864 | 14,664 | 11,185 | 13,011 | 183,591 |
| <b>Philadelphia:</b>    |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1918.....               |        |        | 2,620  | 2,484  | 3,591  | 4,941  | 4,721  | 4,069  | 3,419  | 3,445  | 2,693  | 2,898  | 134,881 |
| 1919.....               | 3,824  | 3,250  | 3,748  | 4,101  | 5,064  | 6,660  | 5,026  | 4,356  | 4,141  | 3,847  | 4,181  | 2,993  | 51,191  |
| 1920.....               | 3,264  | 3,520  | 3,368  | 2,964  | 3,980  | 6,237  | 5,850  | 4,773  | 4,668  | 3,771  | 3,010  | 3,165  | 48,630  |
| 1921.....               | 3,250  | 2,817  | 3,860  | 4,084  | 6,139  | 7,803  | 6,486  | 5,713  | 5,107  | 4,780  | 4,184  | 4,543  | 58,766  |
| <b>Boston:</b>          |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1918.....               |        |        | 4,323  | 4,071  | 6,159  | 11,874 | 12,237 | 7,569  | 5,377  | 6,218  | 5,079  | 3,429  | 166,336 |
| 1919.....               | 4,014  | 3,821  | 3,140  | 4,378  | 9,554  | 14,107 | 13,699 | 7,609  | 5,241  | 3,412  | 2,210  | 2,038  | 73,223  |
| 1920.....               | 3,216  | 3,176  | 5,369  | 3,709  | 6,323  | 12,060 | 14,406 | 8,749  | 6,762  | 4,372  | 2,378  | 2,474  | 72,993  |
| 1921.....               | 3,722  | 3,752  | 4,147  | 3,881  | 8,045  | 12,536 | 9,433  | 9,357  | 6,994  | 6,296  | 3,282  | 3,093  | 74,538  |
| <b>San Francisco:</b>   |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1918.....               | 2,278  | 1,851  | 2,564  | 3,129  | 2,771  | 2,170  | 1,762  | 1,531  | 1,178  | 1,215  | 1,258  | 1,201  | 22,908  |
| 1919.....               | 1,866  | 1,479  | 2,014  | 2,792  | 2,979  | 2,434  | 2,202  | 1,532  | 1,094  | 1,337  | 1,333  | 1,269  | 22,031  |
| 1920.....               | 1,459  | 1,685  | 2,178  | 3,140  | 2,767  | 2,197  | 1,744  | 1,789  | 1,722  | 1,789  | 1,566  | 1,572  | 23,596  |
| 1921.....               | 1,652  | 1,431  | 1,932  | 2,345  | 2,255  | 2,308  | 2,359  | 2,710  | 2,064  | 2,538  | 2,206  | 1,718  | 25,566  |
| <b>Total 5 markets:</b> |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 1918.....               |        |        | 40,305 | 45,048 | 50,851 | 83,058 | 79,149 | 60,456 | 46,708 | 51,169 | 38,277 | 35,797 | 539,821 |
| 1919.....               | 37,867 | 34,846 | 36,592 | 41,287 | 63,669 | 84,993 | 68,926 | 55,246 | 43,282 | 35,573 | 30,731 | 25,010 | 558,922 |
| 1920.....               | 29,827 | 29,009 | 35,314 | 28,002 | 43,571 | 66,043 | 71,167 | 53,714 | 43,551 | 33,378 | 26,917 | 26,050 | 468,543 |
| 1921.....               | 30,779 | 28,936 | 35,154 | 36,088 | 59,563 | 73,449 | 61,464 | 62,734 | 50,216 | 45,350 | 36,420 | 37,257 | 565,410 |

<sup>1</sup> Ten months' total, March to December, inclusive.

BUTTER—Continued.

TABLE 327.—Cold-storage holdings of creamery butter, 1916 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

| Year.     | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. |
|-----------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|
| 1916..... | 48,977  | 31,139  | 15,033  | 3,346   | 1,082  | 7,017   | 53,863  | 102,537 | 105,336  | 100,522 | 85,280  | 67,292  |
| 1917..... | 46,134  | 30,474  | 16,952  | 6,805   | 3,607  | 9,953   | 49,982  | 88,992  | 108,179  | 109,154 | 100,115 | 79,928  |
| 1918..... | 50,726  | 26,618  | 18,908  | 14,629  | 9,536  | 12,698  | 49,140  | 88,305  | 99,334   | 87,883  | 50,874  | 65,111  |
| 1919..... | 43,910  | 36,777  | 24,191  | 11,909  | 9,659  | 29,435  | 90,158  | 123,546 | 131,388  | 121,816 | 100,474 | 73,634  |
| 1920..... | 53,737  | 38,359  | 22,568  | 12,555  | 7,554  | 12,872  | 52,526  | 101,455 | 115,558  | 113,385 | 101,778 | 79,750  |
| 1921..... | 58,682  | 41,486  | 27,108  | 14,732  | 7,712  | 21,682  | 61,991  | 82,838  | 92,392   | 90,116  | 77,983  | 65,129  |

TABLE 328.—Butter and cheese: Monthly production of creamery butter and American cheese, United States, 1916 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

| Year.                                | Jan.   | Feb.   | Mar.   | Apr.   | May.    | June.   | July.   | Aug.    | Sept.  | Oct.   | Nov.   | Dec.   | Total.    |
|--------------------------------------|--------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|--------|-----------|
| <b>Creamery butter:</b>              |        |        |        |        |         |         |         |         |        |        |        |        |           |
| 1916.....                            |        |        |        |        |         |         |         |         | 76,028 | 54,308 | 43,469 | 40,203 | 124,008   |
| 1917.....                            | 43,997 | 38,459 | 47,371 | 53,809 | 75,108  | 98,898  | 94,151  | 83,938  | 76,744 | 56,176 | 42,705 | 48,157 | 759,511   |
| 1918.....                            | 42,357 | 42,339 | 49,086 | 57,332 | 85,564  | 104,335 | 97,440  | 85,148  | 72,397 | 63,836 | 45,741 | 45,560 | 793,285   |
| 1919.....                            | 52,189 | 44,343 | 54,822 | 67,487 | 103,941 | 119,357 | 104,156 | 84,458  | 68,315 | 58,723 | 45,041 | 46,662 | 849,994   |
| 1920.....                            | 49,044 | 46,355 | 56,303 | 60,622 | 86,845  | 114,695 | 110,844 | 90,669  | 77,106 | 65,129 | 53,570 | 52,395 | 863,577   |
| 1921 <sup>1</sup> .....              | 55,442 | 54,876 | 65,596 | 80,363 | 116,053 | 127,641 | 109,288 | 108,897 | 57,634 | 82,785 | 68,604 | 69,104 | 1,026,583 |
| <b>American cheese (whole milk):</b> |        |        |        |        |         |         |         |         |        |        |        |        |           |
| 1916.....                            |        |        |        |        |         |         |         |         | 29,984 | 18,162 | 11,772 | 7,607  | 167,525   |
| 1917.....                            | 8,519  | 9,415  | 11,918 | 17,577 | 23,932  | 33,796  | 35,296  | 32,248  | 37,613 | 22,303 | 14,262 | 8,070  | 264,949   |
| 1918.....                            | 8,143  | 7,860  | 11,992 | 17,931 | 31,285  | 40,184  | 34,332  | 29,996  | 25,424 | 18,862 | 12,172 | 9,097  | 247,278   |
| 1919.....                            | 10,956 | 11,855 | 19,009 | 21,642 | 34,849  | 44,599  | 35,465  | 30,940  | 26,257 | 23,114 | 13,107 | 10,044 | 281,837   |
| 1920.....                            | 10,457 | 11,509 | 14,954 | 18,856 | 29,832  | 41,376  | 34,313  | 26,787  | 22,935 | 20,054 | 13,308 | 10,303 | 254,684   |
| 1921 <sup>1</sup> .....              | 13,402 | 12,479 | 17,210 | 22,604 | 33,065  | 35,083  | 26,085  | 26,763  | 22,852 | 20,351 | 13,161 | 11,432 | 254,927   |

<sup>1</sup> Four months' total, September to December, inclusive.

<sup>2</sup> Preliminary.

OLEOMARGARINE.

TABLE 329.—Oleomargarine: Yearly production, United States, 1918 to 1920.

[In thousands of pounds—i. e., 000 omitted.]

| Year.                   | Uncolored.                |                            |                         | Colored.                  |                            |                         | Total.  |
|-------------------------|---------------------------|----------------------------|-------------------------|---------------------------|----------------------------|-------------------------|---------|
|                         | Animal and vegetable oil. | Exclusively vegetable oil. | Exclusively animal oil. | Animal and vegetable oil. | Exclusively vegetable oil. | Exclusively animal oil. |         |
| 1918.....               | 255,197                   | 88,882                     | 3,307                   | 7,056                     | 112                        | 1,003                   | 355,537 |
| 1919.....               | 214,759                   | 132,906                    | 3,391                   | 9,803                     | 9,793                      | 1,165                   | 371,317 |
| 1920.....               | 161,636                   | 190,280                    | 3,843                   | 8,951                     | 5,359                      | 94                      | 370,163 |
| 1921 <sup>1</sup> ..... | 103,962                   | 99,265                     | 624                     | 5,960                     | 2,026                      | 30                      | 211,867 |

<sup>1</sup> Preliminary.

## CHEESE.

TABLE 330.—Cheese: Monthly and yearly average price per pound, New York, 1910 to 1921.

| Year.                | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Average. |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910.....            | \$0.17 | \$0.17 | \$0.17 | \$0.17 | \$0.14 | \$0.14 | \$0.15 | \$0.15 | \$0.15 | \$0.15 | \$0.16 | \$0.16 | \$0.16   |
| 1911.....            | .15    | .14    | .14    | .14    | .11    | .12    | .12    | .12    | .14    | .14    | .15    | .16    | .14      |
| 1912.....            | .16    | .17    | .18    | .19    | .15    | .14    | .15    | .16    | .16    | .18    | .17    | .17    | .17      |
| 1913.....            | .17    | .17    | .16    | .15    | .13    | .14    | .14    | .15    | .16    | .16    | .16    | .16    | .15      |
| 1914.....            | .17    | .16    | .18    | .16    | .14    | .15    | .15    | .16    | .16    | .15    | .15    | .15    | .16      |
| 1915.....            | .15    | .16    | .16    | .16    | .17    | .15    | .15    | .13    | .14    | .15    | .16    | .17    | .15      |
| 1916.....            | .17    | .18    | .18    | .18    | .18    | .15    | .15    | .17    | .19    | .21    | .23    | .24    | .19      |
| 1917.....            | .24    | .25    | .26    | .26    | .26    | .23    | .24    | .23    | .25    | .25    | .23    | .24    | .25      |
| 1918.....            | .24    | .26    | .24    | .23    | .24    | .23    | .25    | .26    | .28    | .33    | .32    | .35    | .27      |
| 1919.....            | .35    | .30    | .32    | .31    | .32    | .32    | .33    | .31    | .31    | .31    | .32    | .32    | .32      |
| 1920.....            | .32    | .30    | .29    | .30    | .30    | .28    | .27    | .27    | .28    | .28    | .28    | .28    | .29      |
| 1921.....            | .24    | .21    | .25    | .22    | .17    | .16    | .19    | .21    | .21    | .22    | .21    | .21    | .21      |
| 12-year average..... | .21    | .21    | .21    | .21    | .19    | .18    | .19    | .19    | .20    | .21    | .21    | .22    | .20      |

TABLE 331.—Cold-storage holdings of American cheese, 1916 to 1921.

[In thousands of pounds—I. e., 000 omitted.]

| Year.     | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. |
|-----------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|
| 1916..... | 23,558  | 18,908  | 13,378  | 8,448   | 6,546  | 7,301   | 16,357  | 31,569  | 46,776   | 49,579  | 45,713  | 37,080  |
| 1917..... | 31,853  | 22,113  | 15,590  | 9,842   | 7,928  | 11,626  | 34,159  | 67,595  | 91,545   | 90,871  | 78,087  | 75,186  |
| 1918..... | 66,784  | 55,486  | 37,743  | 27,965  | 17,736 | 20,395  | 30,084  | 48,804  | 55,742   | 42,063  | 38,402  | 25,625  |
| 1919..... | 19,823  | 15,486  | 9,537   | 6,750   | 6,027  | 12,478  | 37,501  | 62,645  | 76,681   | 81,359  | 72,889  | 62,508  |
| 1920..... | 53,168  | 43,631  | 34,089  | 23,431  | 16,963 | 13,502  | 39,654  | 51,512  | 60,372   | 55,007  | 48,566  | 39,921  |
| 1921..... | 34,115  | 25,000  | 17,477  | 14,294  | 13,466 | 17,814  | 34,948  | 41,284  | 46,635   | 45,163  | 42,969  | 34,055  |

TABLE 332.—Cheese: International trade, calendar years 1909-1920.

[Cheese includes all cheese made from milk; "cottage cheese," of course, is included. See "General note," Table 291.]

| Country.                       | Average 1909-1913. |               | 1915          |               | 1919          |               | 1920          |               |
|--------------------------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                | Imports.           | Exports.      | Imports.      | Exports.      | Imports.      | Exports.      | Imports.      | Exports.      |
| PRINCIPAL EXPORTING COUNTRIES. | 1,000 pounds.      | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. |
| Bulgaria.....                  | 163                | 5,584         | .....         | .....         | .....         | .....         | .....         | .....         |
| Canada.....                    | 1,054              | 167,260       | 224           | 164,163       | 263           | 107,633       | 480           | 142,768       |
| Italy.....                     | 13,308             | 60,560        | 746           | 988           | 11,151        | 1,810         | 5,893         | 2,790         |
| Netherlands.....               | 522                | 127,379       | 1             | 32,893        | 42            | 27,372        | 493           | 99,738        |
| New Zealand.....               | 8                  | 55,561        | 62            | 98,944        | 31            | 176,099       | 18            | 186,870       |
| Russia.....                    | 3,911              | 7,011         | .....         | .....         | .....         | .....         | .....         | .....         |
| Switzerland.....               | 7,150              | 70,075        | 87            | 2,680         | 996           | 1,369         | 4,368         | 3,202         |
| PRINCIPAL IMPORTING COUNTRIES. | .....              | .....         | .....         | .....         | .....         | .....         | .....         | .....         |
| Algeria.....                   | 6,562              | 138           | 2,475         | .....         | 2,693         | .....         | 5,124         | .....         |
| Argentina.....                 | 10,447             | * 6           | 82            | 14,177        | 209           | 19,562        | .....         | .....         |
| Australia.....                 | 360                | 799           | 14            | 2,303         | 29            | 7,516         | .....         | .....         |
| Austria-Hungary.....           | 12,298             | 966           | .....         | .....         | .....         | .....         | .....         | .....         |
| Belgium.....                   | 31,771             | 354           | .....         | .....         | 16,548        | 179           | 28,092        | 7,397         |
| Brazil.....                    | 4,178              | * 1           | 169           | 33            | 210           | 6             | 1,224         | 4             |
| British South Africa.....      | 5,169              | 4             | 252           | 487           | 45            | 1,580         | 1,285         | 343           |
| Cuba.....                      | 4,520              | 7             | 3,318         | 8             | 2,923         | (5)           | .....         | .....         |
| Denmark.....                   | 1,414              | 527           | (5)           | 7,025         | 385           | 5,725         | 132           | 21,251        |
| Egypt.....                     | 8,182              | * 45          | 2,794         | 85            | 180           | 26            | 1,667         | 15            |
| France.....                    | 49,056             | 26,890        | 11,186        | 4,428         | 15,292        | 7,336         | 26,299        | 15,130        |
| Germany.....                   | 43,687             | 1,967         | .....         | .....         | .....         | .....         | 60,344        | 173           |
| Spain.....                     | 5,032              | 53            | 238           | 141           | 557           | 705           | 3,748         | 354           |
| United Kingdom.....            | 267,407            | 960           | 263,132       | 70            | 236,362       | 111           | 308,832       | 454           |
| United States.....             | 46,346             | 5,142         | 7,662         | 48,408        | 11,832        | 14,190        | 18,994        | 16,291        |
| Other countries.....           | 17,947             | 6,852         | 4,103         | 162           | 11,247        | 131           | 5,509         | 3,507         |
| Total.....                     | 535,417            | 533,124       | 296,434       | 376,942       | 310,425       | 371,819       | 455,428       | 450,317       |

\* Two-year average.

\* Four-year average.

\* Less than 500.

\* One-year average.

CHEESE—Continued.

TABLE 333.—Cold-storage holdings of all cheese other than American cheese, 1917 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

| Year.     | Jan.1. | Feb.1. | Mar.1. | Apr.1. | May 1. | June 1. | July 1. | Aug.1. | Sept.1. | Oct.1. | Nov. 1. | Dec.1. |
|-----------|--------|--------|--------|--------|--------|---------|---------|--------|---------|--------|---------|--------|
| 1917..... |        |        |        |        |        |         |         |        | 3,916   | 8,750  | 3,386   | 3,347  |
| 1918..... | 2,886  | 2,197  | 2,093  | 2,013  | 2,202  | 2,692   | 5,171   | 7,958  | 13,229  | 12,734 | 10,963  | 11,848 |
| 1919..... | 10,402 | 10,263 | 8,771  | 8,352  | 8,810  | 10,813  | 13,905  | 15,749 | 15,928  | 15,234 | 15,091  | 13,906 |
| 1920..... | 11,526 | 10,785 | 9,617  | 8,713  | 8,842  | 9,839   | 14,849  | 18,522 | 19,586  | 19,975 | 20,526  | 18,879 |
| 1921..... | 17,053 | 15,207 | 12,979 | 10,613 | 10,474 | 10,639  | 12,668  | 15,034 | 16,268  | 17,203 | 16,536  | 14,948 |

TABLE 334.—Production and uses of milk in the United States, 1919–1921.

UTILIZATION OF MILK IN THE UNITED STATES, 1919–1921.

| Use.                               | 1919                    |                         | 1920                    |                         | 1921                    |                         |
|------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                                    | Whole milk used.        | Per cent of total milk. | Whole milk used.        | Per cent of total milk. | Whole milk used.        | Per cent of total milk. |
|                                    | <i>Thousand pounds.</i> | <i>Per cent.</i>        | <i>Thousand pounds.</i> | <i>Per cent.</i>        | <i>Thousand pounds.</i> | <i>Per cent.</i>        |
| Household purposes.....            | 38,619,000              | 42.832                  | 139,090,000             | 43.600                  | 145,143,000             | 45.660                  |
| Manufacturing purposes.....        | 45,439,000              | 50.456                  | 43,676,260              | 43.712                  | 46,493,408              | 47.030                  |
| Fed to calves.....                 | 3,500,000               | 3.888                   | 24,202,000              | 4.688                   | 24,280,000              | 1.310                   |
| Waste, loss, and unspecified uses. | 2,500,000               | 2.776                   | 2,689,000               | 3.000                   | 2,965,888               | 3.000                   |
| Grand total.....                   | 90,057,000              | 100.000                 | 89,658,000              | 100.000                 | 98,862,276              | 100.000                 |

<sup>1</sup> Based on a per capita consumption of 43 gallons in 1920 and 49 gallons in 1921. Population estimated on census figures.

<sup>2</sup> Based on a consumption of 200 pounds per calf. Calf crop estimated as 90 per cent of dairy cows; calves fed estimated as 85 per cent of dairy cows, and calves lost and slaughtered at birth estimated as 5 per cent of dairy cows.

<sup>3</sup> Represents annual production of 25,061,000 cows, averaging 3,945 pounds of milk per cow.

UTILIZATION OF MILK IN MANUFACTURED PRODUCTS, 1919–1921.

| Product.                                    | Milk used per unit of product. | 1919                              |                        |                         | 1920                              |                  |                         | 1921                              |                  |                         |
|---|--------------------------------|-----------------------------------|------------------------|-------------------------|-----------------------------------|------------------|-------------------------|-----------------------------------|------------------|-------------------------|
|   |                                | Quantity of product manufactured. | Total whole milk used. | Per cent of total milk. | Quantity of product manufactured. | Whole milk used. | Per cent of total milk. | Quantity of product manufactured. | Whole milk used. | Per cent of total milk. |
|   | <i>Lbs.</i>                    | <i>M. lbs.</i>                    | <i>M. lbs.</i>         | <i>Per ct.</i>          | <i>M. lbs.</i>                    | <i>M. lbs.</i>   | <i>Per ct.</i>          | <i>M. lbs.</i>                    | <i>M. lbs.</i>   | <i>Per ct.</i>          |
| Creamery butter.....                        | 21                             | 875,000                           | 18,375,000             | 20.404                  | 863,577                           | 18,135,117       | 20.226                  | 1,054,938                         | 22,153,698       | 22.408                  |
| Farm butter.....                            | 21                             | 685,000                           | 14,385,000             | 15.973                  | 675,000                           | 14,175,000       | 15.810                  | 850,000                           | 13,650,000       | 13.807                  |
| Cheese (all kinds).....                     | 10                             | 420,000                           | 4,200,000              | 4.664                   | 362,431                           | 3,624,310        | 4.042                   | 1,355,388                         | 3,558,380        | 3.599                   |
| Condensed and evaporated milk.....          | 2.5                            | 1,925,000                         | 4,813,000              | 5.344                   | 1,578,015                         | 3,945,038        | 4.400                   | 1,464,163                         | 3,660,408        | 3.703                   |
| Powdered milk.....                          | 8                              | 9,000                             | 72,000                 | .080                    | 10,334                            | 82,672           | .092                    | 4,243                             | 33,944           | .034                    |
| Powdered cream.....                         | 19                             | 670                               | 12,000                 | .013                    | 809                               | 5,871            | .007                    | 130                               | 2,470            | .002                    |
| Malted milk.....                            | 2.2                            | 18,000                            | 40,000                 | .045                    | 19,715                            | 43,373           | .048                    | 15,652                            | 34,434           | .035                    |
| Sterilized milk (canned).....               | 1                              | 4,500                             | 4,500                  | .005                    | 5,623                             | 5,623            | .006                    | 5,074                             | 5,074            | .005                    |
| Milk chocolate.....                         |                                |                                   |                        |                         | 60,000                            |                  | .067                    |                                   | 240,000          | .041                    |
| Oleomargarine.....                          | .065                           | 371,320                           | 87,000                 | .097                    | 370,163                           | 24,256           | .027                    | 211,867                           | ( <sup>2</sup> ) |                         |
|   |                                | <i>M. gals.</i>                   |                        |                         | <i>M. gals.</i>                   |                  |                         | <i>M. gals.</i>                   |                  |                         |
| Ice cream.....                              | 13.75                          | 230,000                           | 3,450,000              | 3.831                   | 260,000                           | 3,575,000        | 3.987                   | 244,000                           | 3,355,000        | 3.396                   |
| Total whole milk used in manufacturing..... |                                |                                   | 45,439,000             | 50.456                  |                                   | 43,676,260       | 43.712                  |                                   | 46,493,408       | 47.030                  |

<sup>1</sup> Includes 6,000,000 pounds of farm-made cheese.

<sup>2</sup> A large quantity of milk chocolate was made from powdered, condensed, and evaporated milk.

<sup>3</sup> Omitted in 1921 because of negligible amount of whole milk used.

<sup>4</sup> Batch-made ice cream averages 6 pounds per gallon, and continuous machine made weighs 5 pounds per gallon; average amount of milk to make 1 gallon of ice cream taken at 13.75 pounds.



## EGGS.

TABLE 335.—Eggs: Farm price, cents per dozen, 1st of each month, 1909-1921.

| Year.     | Jan.  | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------|-------|------|------|------|------|-------|-------|------|-------|------|------|------|
| 1909..... | ..... | 25.8 | 20.1 | 16.8 | 17.8 | 18.4  | 18.5  | 19.2 | 20.2  | 22.1 | 24.8 | 28.4 |
| 1910..... | 30.5  | 28.9 | 22.9 | 18.6 | 18.6 | 18.3  | 18.2  | 17.6 | 19.4  | 22.4 | 25.3 | 29.0 |
| 1911..... | 30.4  | 22.1 | 16.5 | 14.9 | 14.7 | 14.5  | 14.2  | 15.5 | 17.4  | 20.0 | 23.5 | 28.7 |
| 1912..... | 29.5  | 29.1 | 24.5 | 17.8 | 17.1 | 16.7  | 16.7  | 17.4 | 19.1  | 22.0 | 25.9 | 29.7 |
| 1913..... | 28.8  | 22.8 | 19.4 | 16.4 | 16.1 | 16.9  | 17.0  | 17.2 | 19.5  | 23.4 | 27.4 | 33.0 |
| 1914..... | 30.7  | 28.4 | 24.2 | 17.6 | 16.8 | 17.3  | 17.6  | 18.2 | 21.0  | 23.5 | 25.3 | 29.7 |
| 1915..... | 31.6  | 29.2 | 21.3 | 16.6 | 17.1 | 16.6  | 16.8  | 17.0 | 18.7  | 22.3 | 26.3 | 30.6 |
| 1916..... | 30.6  | 26.8 | 21.2 | 17.9 | 18.1 | 19.0  | 19.7  | 20.7 | 23.3  | 28.1 | 32.2 | 38.1 |
| 1917..... | 37.7  | 35.8 | 33.8 | 25.9 | 30.0 | 31.1  | 28.3  | 29.8 | 33.2  | 37.4 | 39.4 | 43.8 |
| 1918..... | 46.3  | 49.4 | 40.4 | 31.2 | 31.0 | 29.8  | 30.7  | 34.4 | 36.4  | 41.6 | 47.2 | 55.0 |
| 1919..... | 57.2  | 48.3 | 33.1 | 34.3 | 36.8 | 38.6  | 36.8  | 39.3 | 41.0  | 44.7 | 54.0 | 61.9 |
| 1920..... | 64.8  | 56.9 | 46.6 | 38.8 | 37.4 | 37.0  | 36.7  | 40.0 | 44.2  | 50.1 | 56.9 | 65.0 |
| 1921..... | 61.1  | 49.6 | 29.2 | 20.4 | 20.2 | 19.4  | 22.0  | 26.6 | 30.4  | 34.2 | 44.2 | 51.1 |

TABLE 336.—Eggs: Wholesale price, cents per dozen, 1921-1913.

| Date.          | Chicago,<br>fresh firsts. |       |          | Cincinnati,<br>fresh firsts. |       |          | St. Louis,<br>fresh firsts. |       |          | Milwaukee,<br>fresh firsts. |       |          | New York,<br>fresh firsts. |       |          |
|----------------|---------------------------|-------|----------|------------------------------|-------|----------|-----------------------------|-------|----------|-----------------------------|-------|----------|----------------------------|-------|----------|
|                | Low.                      | High. | Average. | Low.                         | High. | Average. | Low.                        | High. | Average. | Low.                        | High. | Average. | Low.                       | High. | Average. |
| 1921.          |                           |       |          |                              |       |          |                             |       |          |                             |       |          |                            |       |          |
| January.....   | 52                        | 72½   | 62.6     | 52                           | 69    | 59.7     | 49                          | 67    | 58.3     | 55                          | 67    | 59.9     | 58                         | 79    | 67.8     |
| February.....  | 30½                       | 53    | 37.6     | 27                           | 52    | 35.8     | 30                          | 50    | 34.8     | 31                          | 54    | 36.7     | 36½                        | 57    | 42.8     |
| March.....     | 22½                       | 33½   | 28.1     | 19                           | 33½   | 26.9     | 19½                         | 32    | 25.9     | 22                          | 32    | 27.4     | 24                         | 39    | 31.0     |
| April.....     | 21½                       | 25½   | 23.6     | 20½                          | 28    | 22.2     | 19½                         | 23½   | 21.2     | 22                          | 24½   | 23.2     | 25                         | 29    | 27.1     |
| May.....       | 19½                       | 22½   | 21.7     | 18½                          | 22½   | 20.6     | 17½                         | 20    | 19.2     | 20                          | 22½   | 21.3     | 20½                        | 27    | 24.7     |
| June.....      | 21½                       | 26    | 24.7     | 18½                          | 28    | 22.9     | 18                          | 23    | 21.2     | 20                          | 25½   | 22.8     | 24½                        | 30    | 26.6     |
| July.....      | 25½                       | 30    | 28.4     | 26                           | 32    | 28.3     | 22½                         | 24½   | 23.8     | 25                          | 29    | 27.9     | 29                         | 37    | 33.0     |
| August.....    | 29                        | 31    | 30.0     | 31                           | 33    | 32.0     | 25                          | 28    | 26.9     | 28½                         | 30    | 28.9     | 32½                        | 38    | 35.3     |
| September..... | 29                        | 39    | 33.1     | 31                           | 40    | 35.4     | 27                          | 34    | 30.5     | 29                          | 35½   | 31.8     | 34                         | 46    | 38.8     |
| October.....   | 38                        | 51    | 44.3     | 38                           | 55    | 47.5     | 34                          | 46    | 40.5     | 35                          | 46    | 41.4     | 38                         | 58    | 47.9     |
| November.....  | 49                        | 55    | 52.4     | 38                           | 61    | 45.3     | 46                          | 50    | 48.2     | 45                          | 53    | 50.2     | 51                         | 64    | 60.4     |
| December.....  | 40                        | 56    | 49.5     | 34                           | 60    | 45.9     | 38                          | 50    | 45.0     | 40                          | 53    | 49.3     | 45                         | 62    | 55.6     |
|                | 19½                       | 72    | 36.3     | 18½                          | 69    | 35.5     | 17½                         | 67    | 33.0     | 20                          | 67    | 35.1     | 20½                        | 79    | 40.9     |
| 1920.....      | 37                        | 78    | 51.7     | 37                           | 80    | 52.9     | 33                          | 73    | 48.6     | 35                          | 77    | 50.2     | 40½                        | 89    | 57.5     |
| 1919.....      | 35                        | 69    | 48.2     | 32½                          | 78    | 48.7     | 33                          | 72    | 45.5     | 35                          | 74    | 46.4     | 36½                        | 94    | 55.6     |
| 1918.....      | 29                        | 65    | 44.2     | 26                           | 66    | 42.5     | 26                          | 63    | 41.8     | 30                          | 63    | 47.1     | 31½                        | 72    | 48.6     |
| 1917.....      | 26                        | 57    | .....    | 20                           | 57    | .....    | 25½                         | 51    | .....    | 25½                         | 55    | .....    | 28½                        | 62    | .....    |
| 1916.....      | 18½                       | 41    | .....    | 17                           | 47    | .....    | 17                          | 39    | .....    | 17                          | 38    | .....    | 20½                        | 47    | .....    |
| 1915.....      | 16                        | 38    | .....    | 10                           | 40½   | .....    | 14½                         | 37½   | .....    | 15½                         | 34    | .....    | 18                         | 44    | .....    |
| 1914.....      | 17                        | 36    | .....    | 16½                          | 38½   | .....    | 14                          | 35    | .....    | 15                          | 32    | .....    | 20                         | 62    | .....    |
| 1913.....      | 16                        | 37    | .....    | 15½                          | 42    | .....    | 12                          | 35    | .....    | 13                          | 35    | .....    | 20                         | 65    | .....    |

TABLE 337.—Cold-storage holdings of case eggs, 1916 to 1921.

[In thousands of cases—i. e., 000 omitted.]

| Year.     | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. |
|-----------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|
| 1916..... | 1,508   | 458     | 35      | 264     | 2,327  | 4,593   | 5,574   | 6,060   | 5,600    | 4,668   | 3,985   | 2,146   |
| 1917..... | 920     | 149     | 7       | 190     | 2,105  | 4,922   | 6,617   | 6,865   | 6,436    | 5,837   | 4,688   | 2,948   |
| 1918..... | 1,300   | 200     | 20      | 344     | 2,957  | 5,099   | 6,554   | 6,568   | 6,265    | 5,369   | 3,812   | 2,071   |
| 1919..... | 740     | 130     | 26      | 320     | 3,278  | 6,098   | 7,659   | 7,850   | 7,685    | 6,558   | 5,087   | 3,341   |
| 1920..... | 1,542   | 342     | 29      | 122     | 2,135  | 5,143   | 6,747   | 6,872   | 6,372    | 5,295   | 3,888   | 1,824   |
| 1921..... | 408     | 43      | 43      | 1,926   | 4,909  | 6,844   | 7,534   | 7,605   | 7,210    | 6,269   | 4,380   | 2,408   |

## CHICKENS AND TURKEYS.

TABLE 338.—*Chickens: Farm price, cents per pound, 1st of each month, 1909-1921.*

| Year.     | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------|------|------|------|------|------|-------|-------|------|-------|------|------|------|
| 1909..... | 9.9  | 10.0 | 10.2 | 10.6 | 10.9 | 11.1  | 11.2  | 11.1 | 11.3  | 10.9 | 10.8 | 10.6 |
| 1910..... | 10.9 | 11.1 | 11.6 | 11.9 | 12.4 | 12.4  | 12.3  | 12.2 | 11.9  | 11.6 | 11.3 | 10.6 |
| 1911..... | 10.5 | 10.6 | 10.6 | 10.8 | 11.0 | 11.0  | 11.2  | 11.2 | 11.1  | 10.9 | 10.8 | 9.6  |
| 1912..... | 9.8  | 10.3 | 10.5 | 10.8 | 11.1 | 11.1  | 11.0  | 11.3 | 11.3  | 11.5 | 11.2 | 10.8 |
| 1913..... | 10.7 | 10.9 | 11.1 | 11.6 | 11.8 | 12.0  | 12.1  | 12.4 | 12.4  | 12.5 | 12.1 | 11.5 |
| 1914..... | 11.5 | 11.7 | 12.1 | 12.3 | 12.5 | 12.5  | 12.7  | 12.8 | 12.7  | 12.5 | 11.9 | 11.3 |
| 1915..... | 11.2 | 11.5 | 11.7 | 11.9 | 12.1 | 12.2  | 12.2  | 12.2 | 12.1  | 12.0 | 11.8 | 11.5 |
| 1916..... | 11.4 | 11.9 | 12.2 | 12.6 | 13.2 | 13.5  | 13.8  | 13.8 | 13.9  | 14.3 | 14.3 | 14.2 |
| 1917..... | 13.9 | 14.7 | 15.5 | 16.1 | 17.5 | 17.5  | 17.3  | 22.6 | 17.1  | 18.1 | 17.7 | 17.5 |
| 1918..... | 17.9 | 18.3 | 19.9 | 19.8 | 19.8 | 20.0  | 21.2  | 22.6 | 22.3  | 23.1 | 22.4 | 21.3 |
| 1919..... | 21.7 | 21.6 | 22.2 | 23.5 | 25.2 | 25.7  | 25.2  | 25.9 | 25.7  | 24.2 | 22.9 | 22.3 |
| 1920..... | 29.6 | 24.1 | 25.4 | 26.8 | 27.4 | 27.2  | 27.0  | 27.4 | 26.7  | 26.4 | 23.4 | 22.1 |
| 1921..... | 20.7 | 21.9 | 22.1 | 22.2 | 21.7 | 20.7  | 21.1  | 21.2 | 20.9  | 20.3 | 19.0 | 18.4 |

TABLE 339.—*Turkeys: Farm price, cents per pound, 15th of month, 1912-1922.*

| Year.        | 1912-13 | 1913-14 | 1914-15 | 1915-16 | 1916-17 | 1917-18 | 1918-19 | 1919-20 | 1920-21 | 1921-22 |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Oct. 15..... | 13.6    | 14.6    | 14.1    | 13.7    | 17.0    | 20.0    | 23.9    | 23.6    | 30.0    | 25.7    |
| Nov. 15..... | 14.4    | 15.2    | 14.1    | 14.8    | 18.6    | 21.0    | 25.7    | 23.3    | 31.8    | 28.2    |
| Dec. 15..... | 14.3    | 15.5    | 14.5    | 15.5    | 19.6    | 23.0    | 27.0    | 31.1    | 33.1    | 32.5    |
| Jan. 15..... | 14.9    | 15.5    | 14.5    | 15.6    | 19.5    | 22.9    | 27.3    | 32.0    | 33.0    | 30.7    |

TABLE 340.—*Cold-storage holdings of frozen poultry, 1917 to 1921.*

[In thousands of pounds.—i. e., 000 omitted.]

| Year.     | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. |
|-----------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|
| 1917..... | 32,184  | 35,601  | 27,796  | 25,988  | 67,212 | 64,286  | 60,194  | 54,132  | 56,093   | 46,737  | 51,743  | 49,561  |
| 1918..... | 64,557  | 68,238  | 56,950  | 44,115  | 26,528 | 18,929  | 17,652  | 18,756  | 25,034   | 29,788  | 44,433  | 71,228  |
| 1919..... | 108,722 | 119,678 | 109,627 | 92,897  | 71,162 | 55,616  | 49,212  | 40,573  | 32,915   | 30,492  | 32,139  | 54,749  |
| 1920..... | 57,512  | 92,238  | 78,421  | 61,436  | 40,523 | 30,335  | 24,790  | 22,364  | 21,331   | 22,953  | 31,070  | 49,046  |
| 1921..... | 79,026  | 81,096  | 79,001  | 62,315  | 47,651 | 35,408  | 27,268  | 21,188  | 20,064   | 25,902  | 34,576  | 65,167  |

## SHEEP.

TABLE 341.—*Sheep: Number and value on farms in the United States, January 1, 1870-1922.*

NOTE.—Figures in *italics* are census returns; figures in roman are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910 giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—i. e., 000 omitted.]

| Year.              | Number.       | Farm value<br>Jan. 1. | Year.     | Number. | Farm value<br>Jan. 1. |
|--------------------|---------------|-----------------------|-----------|---------|-----------------------|
| 1870, June 1.....  | <i>29,478</i> | 54,062                | 1915..... | 49,955  | 224,687               |
| 1880, June 1.....  | <i>36,192</i> | 80,757                | 1916..... | 48,625  | 251,594               |
| 1890, June 1.....  | <i>35,935</i> | 38,447                | 1917..... | 47,616  | 339,529               |
| 1900, June 1.....  | <i>61,604</i> | 186,271               | 1918..... | 45,603  | 574,575               |
| 1910, Apr. 15..... | <i>52,448</i> | 216,030               | 1919..... | 48,866  | 568,265               |
| 1911.....          | 53,633        | 209,535               | 1920..... | 39,025  | 408,586               |
| 1912.....          | 52,362        | 181,170               | 1921..... | 37,452  | 235,855               |
| 1913.....          | 51,482        | 202,779               | 1922..... | 36,048  | 173,159               |
| 1914.....          | 49,719        | 200,045               |           |         |                       |

TABLE 342.—*Sheep: Farm price per head, January 1, 1867-1922.*

| Year.     | Price<br>Jan. 1. | Year.     | Price<br>Jan. 1. | Year.     | Price<br>Jan. 1. | Year.     | Price<br>Jan. 1. |
|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|
| 1867..... | \$2.50           | 1881..... | \$2.39           | 1895..... | \$1.53           | 1909..... | \$3.43           |
| 1868..... | 1.82             | 1882..... | 2.37             | 1896..... | 1.70             | 1910..... | 4.12             |
| 1869..... | 1.64             | 1883..... | 2.53             | 1897..... | 1.52             | 1911..... | 3.91             |
| 1870..... | 1.90             | 1884..... | 2.37             | 1898..... | 2.46             | 1912..... | 3.46             |
| 1871..... | 2.14             | 1885..... | 2.14             | 1899..... | 2.75             | 1913..... | 3.94             |
| 1872..... | 2.61             | 1886..... | 1.91             | 1900..... | 3.03             | 1914..... | 4.02             |
| 1873..... | 2.71             | 1887..... | 2.01             | 1901..... | 2.98             | 1915..... | 4.50             |
| 1874..... | 2.43             | 1888..... | 2.05             | 1902..... | 2.65             | 1916..... | 5.17             |
| 1875..... | 2.55             | 1889..... | 2.13             | 1903..... | 2.63             | 1917..... | 7.13             |
| 1876..... | 2.37             | 1890..... | 2.41             | 1904..... | 2.59             | 1918..... | 11.82            |
| 1877..... | 2.13             | 1891..... | 2.50             | 1905..... | 2.82             | 1919..... | 11.63            |
| 1878..... | 2.21             | 1892..... | 2.53             | 1906..... | 3.54             | 1920..... | 10.47            |
| 1879..... | 2.07             | 1893..... | 2.66             | 1907..... | 3.84             | 1921..... | 6.36             |
| 1880..... | 2.29             | 1894..... | 1.98             | 1908..... | 3.88             | 1922..... | 4.80             |

SHEEP—Continued.

TABLE 343.—*Sheep: Number and value on farms January 1, 1920–1922.*

| State.              | Number (thousands)<br>Jan. 1— |        |        | Average price per head<br>Jan. 1— |        |        | Farm value (thousands of<br>dollars) Jan. 1— |         |         |
|---------------------|-------------------------------|--------|--------|-----------------------------------|--------|--------|--|---------|---------|
|                     | 1920                          | 1921   | 1922   | 1920                              | 1921   | 1922   | 1920   | 1921    | 1922    |
| Maine.....          | 119                           | 100    | 95     | \$9.60                            | \$5.50 | \$4.80 | \$1,142                                      | \$550   | \$456   |
| New Hampshire.....  | 28                            | 24     | 20     | 9.70                              | 7.30   | 5.60   | 272  | 175     | 112     |
| Vermont.....        | 63                            | 58     | 48     | 11.50                             | 6.70   | 5.00   | 724  | 389     | 240     |
| Massachusetts.....  | 19                            | 17     | 17     | 12.60                             | 9.50   | 6.60   | 239  | 162     | 112     |
| Rhode Island.....   | 3                             | 3      | 3      | 12.10                             | 9.90   | 6.30   | 36   | 30      | 19      |
| Connecticut.....    | 11                            | 10     | 9      | 12.60                             | 9.50   | 7.50   | 139  | 95      | 68      |
| New York.....       | 579                           | 550    | 512    | 12.20                             | 7.50   | 5.80   | 7,064  | 4,125   | 2,970   |
| New Jersey.....     | 10                            | 10     | 10     | 11.00                             | 10.50  | 7.40   | 110  | 105     | 74      |
| Pennsylvania.....   | 509                           | 478    | 468    | 11.60                             | 7.60   | 5.80   | 5,904  | 3,633   | 2,714   |
| Delaware.....       | 3                             | 3      | 3      | 10.40                             | 7.40   | 6.00   | 31   | 22      | 18      |
| Maryland.....       | 103                           | 93     | 89     | 11.00                             | 8.00   | 6.20   | 1,133  | 744     | 552     |
| Virginia.....       | 342                           | 335    | 328    | 11.80                             | 7.50   | 5.60   | 4,036  | 2,512   | 1,837   |
| West Virginia.....  | 510                           | 455    | 480    | 10.70                             | 6.40   | 4.80   | 5,437  | 3,104   | 2,304   |
| North Carolina..... | 61                            | 59     | 54     | 9.60                              | 6.60   | 4.90   | 574  | 587     | 412     |
| South Carolina..... | 24                            | 23     | 22     | 7.10                              | 3.70   | 3.00   | 170  | 85      | 68      |
| Georgia.....        | 72                            | 69     | 70     | 4.80                              | 4.20   | 2.70   | 346  | 290     | 189     |
| Florida.....        | 65                            | 63     | 64     | 5.20                              | 3.50   | 3.10   | 338  | 220     | 198     |
| Ohio.....           | 2,103                         | 1,977  | 1,957  | 10.10                             | 5.70   | 4.60   | 21,240                                       | 11,269  | 9,002   |
| Indiana.....        | 644                           | 606    | 606    | 11.80                             | 6.70   | 5.20   | 7,599  | 4,060   | 3,151   |
| Illinois.....       | 638                           | 561    | 516    | 12.60                             | 6.90   | 5.30   | 8,039  | 3,871   | 2,735   |
| Michigan.....       | 1,209                         | 1,161  | 1,115  | 11.70                             | 6.50   | 5.20   | 14,145                                       | 7,595   | 5,785   |
| Wisconsin.....      | 450                           | 432    | 367    | 11.00                             | 6.40   | 4.60   | 5,250  | 2,765   | 1,688   |
| Minnesota.....      | 509                           | 468    | 446    | 11.00                             | 6.10   | 4.70   | 5,599  | 2,555   | 2,092   |
| Iowa.....           | 1,092                         | 1,005  | 854    | 12.20                             | 6.90   | 5.40   | 13,322                                       | 6,934   | 4,612   |
| Missouri.....       | 1,272                         | 1,158  | 1,042  | 12.20                             | 6.00   | 4.50   | 15,518                                       | 6,948   | 4,689   |
| North Dakota.....   | 299                           | 272    | 250    | 10.90                             | 5.70   | 4.60   | 3,259  | 1,550   | 1,150   |
| South Dakota.....   | 544                           | 676    | 689    | 10.20                             | 5.66   | 4.50   | 5,609  | 3,780   | 3,100   |
| Nebraska.....       | 573                           | 521    | 521    | 10.70                             | 6.00   | 5.20   | 6,131  | 3,126   | 2,709   |
| Kansas.....         | 361                           | 321    | 279    | 11.70                             | 5.90   | 4.80   | 4,224  | 1,594   | 1,339   |
| Kentucky.....       | 708                           | 651    | 631    | 11.20                             | 6.40   | 5.00   | 7,930  | 4,166   | 3,155   |
| Tennessee.....      | 364                           | 349    | 332    | 10.90                             | 5.80   | 4.00   | 3,968  | 2,024   | 1,328   |
| Alabama.....        | 82                            | 79     | 83     | 5.70                              | 4.40   | 2.70   | 467  | 345     | 224     |
| Mississippi.....    | 164                           | 148    | 142    | 6.30                              | 3.40   | 3.00   | 1,033  | 503     | 426     |
| Louisiana.....      | 130                           | 124    | 124    | 5.40                              | 3.80   | 2.80   | 702  | 471     | 347     |
| Texas.....          | 2,650                         | 3,047  | 3,077  | 9.60                              | 6.10   | 3.40   | 25,440                                       | 18,587  | 10,462  |
| Oklahoma.....       | 105                           | 91     | 91     | 10.70                             | 6.20   | 4.30   | 1,124  | 564     | 391     |
| Arkansas.....       | 100                           | 96     | 90     | 7.60                              | 4.20   | 2.90   | 760  | 403     | 261     |
| Montana.....        | 2,082                         | 1,973  | 2,170  | 10.40                             | 5.80   | 4.70   | 21,663                                       | 11,443  | 10,169  |
| Wyoming.....        | 2,500                         | 2,350  | 2,374  | 10.30                             | 6.30   | 5.50   | 25,750                                       | 14,805  | 13,057  |
| Colorado.....       | 2,085                         | 2,306  | 1,954  | 9.10                              | 5.30   | 4.60   | 18,974                                       | 12,222  | 8,968   |
| New Mexico.....     | 2,566                         | 2,468  | 2,343  | 9.20                              | 5.90   | 3.90   | 23,607                                       | 14,561  | 9,138   |
| Arizona.....        | 1,200                         | 1,200  | 1,100  | 10.20                             | 7.00   | 4.90   | 12,240                                       | 8,400   | 5,890   |
| Utah.....           | 2,245                         | 2,200  | 2,250  | 9.70                              | 6.50   | 4.90   | 21,776                                       | 14,300  | 11,025  |
| Nevada.....         | 1,150                         | 1,100  | 1,190  | 10.50                             | 7.00   | 5.30   | 12,390                                       | 8,360   | 6,307   |
| Idaho.....          | 2,914                         | 2,623  | 2,361  | 10.70                             | 6.30   | 6.00   | 31,180                                       | 16,525  | 14,166  |
| Washington.....     | 624                           | 555    | 500    | 10.90                             | 6.90   | 5.40   | 6,802  | 3,830   | 2,700   |
| Oregon.....         | 2,250                         | 2,025  | 1,823  | 10.80                             | 6.70   | 4.50   | 24,300                                       | 13,568  | 8,204   |
| California.....     | 2,500                         | 2,500  | 2,450  | 11.00                             | 6.80   | 5.30   | 27,500                                       | 17,000  | 12,985  |
| United States.....  | 39,025                        | 37,452 | 36,048 | 10.47                             | 6.30   | 4.80   | 408,588                                      | 235,855 | 173,159 |

TABLE 344.—*Sheep: Farm price per 100 pounds, 15th of month, 1910–1921.*

| Year.     | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910..... | \$5.63 | \$5.09 | \$5.64 | \$6.10 | \$5.79 | \$5.44 | \$5.47 | \$4.68 | \$4.81 | \$4.68 | \$4.63 | \$4.54 |
| 1911..... | 4.47   | 4.34   | 4.45   | 4.55   | 4.51   | 4.24   | 4.19   | 3.98   | 3.91   | 3.68   | 3.65   | 3.71   |
| 1912..... | 3.89   | 4.01   | 4.12   | 4.57   | 4.74   | 4.52   | 4.21   | 4.26   | 4.11   | 4.19   | 4.05   | 4.21   |
| 1913..... | 4.35   | 4.63   | 4.97   | 5.16   | 4.91   | 4.84   | 4.20   | 4.32   | 4.23   | 4.16   | 4.27   | 4.46   |
| 1914..... | 4.67   | 4.67   | 4.77   | 4.96   | 4.87   | 4.70   | 4.75   | 4.87   | 4.80   | 4.81   | 4.68   | 4.95   |
| 1915..... | 4.95   | 5.14   | 5.36   | 5.80   | 5.54   | 5.43   | 5.35   | 5.16   | 5.06   | 5.18   | 5.18   | 5.38   |
| 1916..... | 5.52   | 5.90   | 6.35   | 6.61   | 6.66   | 6.54   | 6.33   | 6.22   | 6.25   | 6.20   | 6.41   | 6.77   |
| 1917..... | 7.23   | 8.17   | 9.21   | 9.69   | 10.15  | 9.84   | 9.32   | 9.33   | 10.05  | 10.24  | 10.20  | 10.44  |
| 1918..... | 10.55  | 10.75  | 11.41  | 11.98  | 12.32  | 11.56  | 11.04  | 10.99  | 10.79  | 10.35  | 10.11  | 9.46   |
| 1919..... | 9.68   | 9.96   | 10.45  | 11.38  | 10.93  | 10.34  | 9.25   | 9.06   | 8.69   | 8.46   | 8.35   | 8.53   |
| 1920..... | 9.34   | 9.97   | 10.25  | 10.66  | 10.34  | 9.13   | 8.21   | 7.54   | 7.24   | 6.62   | 6.20   | 5.54   |
| 1921..... | 5.30   | 5.01   | 5.27   | 5.11   | 5.11   | 4.74   | 4.84   | 4.38   | 4.11   | 3.96   | 3.84   | 4.10   |

## SHEEP—Continued.

TABLE 345.—*Lambs: Farm price per 100 pounds, 15th of month, 1910–1921.*

| Year.     | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910..... | \$5.82 | \$6.62 | \$7.37 | \$7.47 | \$7.26 | \$7.13 | \$6.71 | \$5.70 | \$5.85 | \$5.78 | \$5.54 | \$5.60 |
| 1911..... | 5.71   | 5.44   | 5.49   | 5.77   | 5.74   | 5.51   | 5.42   | 5.29   | 5.02   | 4.68   | 4.68   | 4.93   |
| 1912..... | 5.22   | 5.15   | 5.38   | 5.98   | 6.16   | 6.02   | 5.74   | 5.50   | 5.49   | 5.42   | 5.37   | 5.70   |
| 1913..... | 6.08   | 6.34   | 6.56   | 6.59   | 6.66   | 6.36   | 6.05   | 5.50   | 5.51   | 5.51   | 5.64   | 5.85   |
| 1914..... | 6.16   | 6.18   | 6.31   | 6.47   | 6.49   | 6.47   | 6.55   | 6.26   | 6.27   | 6.09   | 6.14   | 6.33   |
| 1915..... | 6.47   | 6.67   | 6.06   | 7.35   | 7.32   | 7.26   | 7.21   | 6.70   | 6.71   | 6.70   | 6.76   | 7.02   |
| 1916..... | 7.29   | 7.78   | 8.10   | 8.58   | 8.49   | 8.36   | 8.16   | 8.15   | 8.22   | 8.02   | 8.41   | 8.72   |
| 1917..... | 9.59   | 10.51  | 11.46  | 12.03  | 12.51  | 12.64  | 11.19  | 12.08  | 13.06  | 14.09  | 13.79  | 13.81  |
| 1918..... | 13.88  | 13.77  | 14.11  | 15.34  | 15.39  | 14.98  | 14.20  | 14.20  | 13.73  | 13.20  | 12.54  | 12.44  |
| 1919..... | 12.71  | 13.17  | 14.03  | 14.61  | 14.34  | 13.89  | 13.09  | 12.91  | 12.25  | 11.47  | 11.45  | 11.85  |
| 1920..... | 12.91  | 14.08  | 14.17  | 14.63  | 14.26  | 12.82  | 11.79  | 10.84  | 10.31  | 9.65   | 9.37   | 8.46   |
| 1921..... | 8.44   | 7.76   | 7.90   | 7.55   | 7.78   | 7.59   | 7.37   | 6.99   | 6.27   | 5.98   | 6.12   | 6.60   |

TABLE 346.—*Sheep: Imports, exports, and prices, 1893–1921.*

| Year ending June 30— | Imports. |           |                       | Exports. |             |                       |
|----------------------|----------|-----------|-----------------------|----------|-------------|-----------------------|
|                      | Number.  | Value.    | Average import price. | Number.  | Value.      | Average export price. |
| 1895–1899.....       | 351,602  | \$972,444 | \$2.77                | 296,882  | \$1,861,231 | \$6.21                |
| 1900–1904.....       | 303,990  | 1,082,047 | 3.56                  | 252,138  | 1,525,800   | 6.05                  |
| 1905–1909.....       | 195,963  | 888,150   | 4.52                  | 143,011  | 839,219     | 5.74                  |
| 1910.....            | 126,152  | 696,879   | 5.52                  | 44,517   | 209,000     | 4.69                  |
| 1911.....            | 53,455   | 377,625   | 7.06                  | 121,491  | 636,272     | 5.24                  |
| 1912.....            | 23,588   | 157,257   | 6.67                  | 157,263  | 626,985     | 3.99                  |
| 1913.....            | 15,428   | 90,021    | 5.83                  | 187,132  | 605,725     | 3.24                  |
| 1914.....            | 223,719  | 532,404   | 2.33                  | 162,600  | 534,543     | 3.50                  |
| 1915.....            | 153,317  | 533,987   | 3.48                  | 47,213   | 182,273     | 3.86                  |
| 1916.....            | 285,659  | 917,502   | 3.89                  | 52,723   | 231,585     | 4.43                  |
| 1917.....            | 160,422  | 856,645   | 5.34                  | 53,811   | 367,935     | 6.26                  |
| 1918.....            | 177,681  | 1,979,748 | 11.14                 | 7,959    | 97,028      | 12.19                 |
| 1919.....            | 163,283  | 1,914,473 | 11.72                 | 16,117   | 187,347     | 11.62                 |
| 1920.....            | 199,549  | 2,279,949 | 11.43                 | 59,155   | 711,549     | 12.03                 |
| 1921.....            | 161,292  | 1,541,793 | 9.56                  | 80,723   | 532,510     | 6.60                  |

TABLE 347.—*Sheep, native and western: Monthly average price per 100 pounds, Chicago, 1910–1921.<sup>1</sup>*

| Year.                | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Average. |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 1910.....            | \$5.55 | \$6.50 | \$7.60 | \$7.60 | \$6.55 | \$5.10 | \$4.20 | \$4.20 | \$4.25 | \$3.95 | \$3.70 | \$3.90 | \$5.26   |
| 1911.....            | 4.10   | 4.15   | 4.70   | 4.20   | 4.45   | 3.80   | 3.95   | 3.50   | 3.80   | 3.65   | 3.45   | 3.55   | 3.94     |
| 1912.....            | 4.30   | 4.15   | 5.30   | 5.90   | 6.15   | 4.50   | 4.25   | 4.05   | 4.15   | 4.00   | 4.05   | 4.45   | 4.60     |
| 1913.....            | 5.35   | 5.90   | 6.40   | 6.45   | 5.85   | 5.05   | 4.50   | 4.35   | 4.30   | 4.55   | 4.60   | 4.95   | 5.19     |
| 1914.....            | 5.50   | 5.70   | 5.95   | 6.25   | 5.65   | 5.10   | 5.40   | 5.55   | 5.30   | 5.30   | 5.65   | 5.40   | 5.56     |
| 1915.....            | 5.80   | 6.45   | 7.45   | 7.70   | 7.35   | 5.50   | 6.05   | 6.25   | 5.75   | 6.00   | 5.85   | 6.20   | 6.38     |
| 1916.....            | 7.20   | 7.75   | 8.25   | 8.15   | 8.20   | 7.35   | 7.25   | 7.35   | 7.80   | 7.50   | 8.00   | 9.00   | 7.82     |
| 1917.....            | 10.00  | 11.25  | 11.70  | 12.10  | 13.00  | 10.00  | 9.10   | 9.75   | 11.15  | 11.65  | 11.25  | 11.50  | 11.04    |
| 1918.....            | 12.20  | 12.35  | 13.60  | 15.65  | 14.75  | 13.40  | 12.65  | 13.15  | 11.80  | 10.45  | 9.85   | 9.40   | 12.44    |
| 1919.....            | 10.35  | 11.35  | 14.05  | 14.50  | 12.25  | 9.30   | 9.70   | 9.75   | 8.30   | 8.15   | 8.30   | 9.60   | 10.47    |
| 1920.....            | 11.80  | 13.35  | 13.40  | 14.25  | 12.25  | 8.50   | 8.90   | 7.70   | 6.85   | 6.45   | 5.75   | 4.70   | 9.49     |
| 1921.....            | 5.07   | 4.90   | 6.14   | 6.58   | 6.33   | 4.46   | 5.08   | 4.53   | 4.49   | 4.71   | 4.40   | 4.02   | 5.13     |
| 12 year average..... | 7.27   | 7.82   | 8.71   | 9.11   | 8.58   | 6.84   | 6.75   | 6.68   | 6.50   | 6.36   | 6.24   | 6.46   | 7.28     |

<sup>1</sup> Previous to 1921 figures compiled from Chicago Drovers' Journal Yearbook.

## SHEEP—Continued.

TABLE 348.—*Sheep: Monthly average price per 100 pounds, 1921.*

CHICAGO.

| Month.       | Lambs.  |   |                              | Spring<br>lambs,<br>medium<br>to choice. | Year-<br>ling<br>weth-<br>ers,<br>medium<br>to prime. | Weth-<br>ers,<br>medium<br>to prime. | Ewes.                   |                              | Breeding<br>ewes,<br>full<br>mouth<br>to year-<br>ling. | Feeder<br>lambs,<br>medium<br>to choice. | Feeder<br>ewes,<br>medium<br>and<br>good. |
|--------------|---|---|------------------------------|--|---|--------------------------------------|-------------------------|------------------------------|---|--|---|
|              | Medium<br>to prime<br>(84<br>pounds<br>down). | Medium<br>to prime<br>(85<br>pounds<br>up). | Culls<br>and<br>com-<br>mon. |  |   |                                      | Medium<br>to<br>choice. | Culls<br>and<br>com-<br>mon. |   |  |   |
| January....  | \$10.66                                       | \$9.94                                      | \$8.49                       | .....                                    | \$8.82  | \$5.85                               | \$4.77                  | \$2.57                       | \$4.25  | \$9.21                                   | \$2.50                                    |
| February.... | 9.03  | 8.36  | 6.85                         | .....                                    | 6.82  | 5.23                                 | 4.54                    | 2.74                         | .....   | 7.55                                     | .....                                     |
| March.....   | 9.73  | 9.21  | 7.65                         | .....                                    | 8.14  | 6.61                                 | 5.79                    | 3.30                         | .....   | 8.24                                     | .....                                     |
| April.....   | 9.88  | 9.24  | 8.20                         | .....                                    | 8.40  | 6.71                                 | 6.11                    | 3.42                         | .....   | 7.64                                     | .....                                     |
| May.....     | 10.78   | 10.36                                       | 8.28                         | \$11.84                                  | 8.88  | 6.65                                 | 6.06                    | 3.38                         | .....   | 7.69                                     | .....                                     |
| June.....    | 10.49   | .....                                       | 6.98                         | 11.98                                    | 7.99  | 4.89                                 | 3.84                    | 1.80                         | 4.12  | 6.31                                     | .....                                     |
| July.....    | 9.70  | .....                                       | 6.54                         | .....                                    | 7.23  | 5.49                                 | 4.21                    | 1.94                         | 4.54  | 6.50                                     | .....                                     |
| August.....  | 9.14  | .....                                       | 6.93                         | .....                                    | 6.94  | 5.11                                 | 4.10                    | 2.18                         | 4.87  | 7.15                                     | .....                                     |
| September..  | 8.50  | .....                                       | 6.13                         | .....                                    | 6.16  | 4.57                                 | 3.86                    | 2.23                         | 4.79  | 6.52                                     | .....                                     |
| October..... | 8.40  | .....                                       | 6.26                         | .....                                    | 6.30  | 4.94                                 | 4.11                    | 2.18                         | 4.96  | 7.09                                     | .....                                     |
| November.... | 9.05  | .....                                       | 7.09                         | .....                                    | 6.88  | 4.93                                 | 3.80                    | 2.07                         | .....   | 7.85                                     | .....                                     |
| December.... | 10.65   | .....                                       | 8.67                         | .....                                    | 8.48  | 5.67                                 | 4.47                    | 2.46                         | .....   | 9.40                                     | .....                                     |
| Average..    | 9.67  | 9.42  | 7.28                         | .....                                    | 7.59  | 5.55                                 | 4.64                    | 2.52                         | 4.59  | 7.60                                     | .....                                     |

KANSAS CITY.

|              |        |        |        |         |        |        |        |        |        |        |        |
|--------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| January....  | \$9.78 | .....  | \$7.53 | .....   | \$7.97 | \$5.45 | \$4.53 | \$2.85 | \$4.50 | \$8.05 | \$3.13 |
| February.... | 8.33   | \$7.73 | 6.22   | .....   | 6.54   | 4.77   | 4.29   | 2.57   | .....  | 7.22   | .....  |
| March.....   | 9.14   | 8.52   | 6.94   | .....   | 7.37   | 5.84   | 5.34   | 3.35   | .....  | 7.62   | .....  |
| April.....   | 9.18   | 8.58   | 7.20   | .....   | 7.34   | 6.26   | 5.80   | 3.69   | .....  | 7.42   | .....  |
| May.....     | 10.05  | 9.62   | 7.98   | \$10.78 | 8.05   | 5.98   | 5.48   | 3.33   | .....  | 7.80   | .....  |
| June.....    | 9.64   | 9.19   | 6.48   | 10.41   | 7.26   | 4.18   | 3.27   | 1.75   | .....  | .....  | .....  |
| July.....    | 9.13   | .....  | 5.83   | .....   | 6.10   | 4.80   | 3.89   | 2.02   | 4.26   | 5.37   | .....  |
| August.....  | 8.81   | .....  | 5.75   | .....   | 5.65   | 4.65   | 3.78   | 1.98   | 4.37   | 6.50   | .....  |
| September..  | 8.10   | .....  | 5.44   | .....   | 5.20   | 4.34   | 3.63   | 2.00   | 4.29   | 5.99   | .....  |
| October..... | 7.97   | .....  | 5.69   | .....   | 5.43   | 4.79   | 4.04   | 2.07   | 4.37   | 6.32   | .....  |
| November.... | 8.61   | .....  | 6.20   | .....   | 5.98   | 4.49   | 3.72   | 2.13   | .....  | 7.21   | .....  |
| December.... | 9.76   | .....  | 7.25   | .....   | 7.35   | 4.92   | 3.94   | 2.23   | .....  | 8.40   | .....  |
| Average..    | 9.03   | 8.73   | 6.54   | .....   | 6.69   | 5.04   | 4.31   | 2.50   | 4.36   | 7.08   | .....  |

OMAHA.

|              |         |        |        |         |        |        |        |        |        |        |        |
|--------------|---------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| January....  | \$10.32 | \$9.33 | \$8.13 | .....   | \$7.67 | \$5.56 | \$4.54 | \$2.65 | \$4.35 | \$9.18 | \$3.21 |
| February.... | 8.48    | 7.80   | 6.14   | .....   | 6.19   | 4.87   | 4.35   | 2.45   | .....  | 6.92   | 2.50   |
| March.....   | 9.40    | 8.87   | 7.23   | .....   | 7.46   | 5.99   | 5.57   | 3.48   | .....  | 7.99   | .....  |
| April.....   | 9.43    | 8.86   | 7.77   | .....   | 7.46   | 6.42   | 6.15   | 3.59   | .....  | 7.92   | .....  |
| May.....     | 10.44   | 10.07  | 8.46   | \$11.34 | 8.22   | 6.66   | 6.00   | 3.53   | .....  | 7.83   | .....  |
| June.....    | 9.82    | 9.67   | 6.77   | 11.72   | 7.56   | 4.47   | 3.50   | 1.87   | .....  | 6.33   | .....  |
| July.....    | 9.35    | .....  | 6.44   | .....   | 6.45   | 5.05   | 4.22   | 2.00   | .....  | 6.33   | .....  |
| August.....  | 8.65    | .....  | 6.15   | .....   | 5.96   | 4.92   | 3.76   | 1.81   | .....  | 6.81   | 2.83   |
| September..  | 8.07    | .....  | 5.85   | .....   | 5.27   | 4.24   | 3.45   | 2.08   | 4.22   | 6.15   | 2.94   |
| October..... | 7.91    | .....  | 5.86   | .....   | 5.77   | 4.69   | 3.91   | 2.19   | 4.43   | 6.83   | 3.16   |
| November.... | 8.61    | 8.68   | 6.93   | .....   | 6.11   | 4.70   | 3.64   | 1.94   | .....  | 7.60   | .....  |
| December.... | 10.09   | 9.84   | 8.30   | .....   | 7.42   | 5.11   | 4.01   | 2.20   | .....  | 8.82   | .....  |
| Average..    | 9.21    | 9.14   | 7.00   | .....   | 6.80   | 5.22   | 4.42   | 2.48   | .....  | 7.39   | 2.94   |

EAST ST. LOUIS.

|              |        |        |        |         |        |        |        |        |       |       |       |
|--------------|--------|--------|--------|---------|--------|--------|--------|--------|-------|-------|-------|
| January....  | \$9.88 | .....  | \$7.19 | .....   | \$8.37 | .....  | \$4.40 | \$2.48 | ..... | ..... | ..... |
| February.... | 8.88   | \$8.00 | 6.45   | .....   | 6.60   | .....  | 4.20   | 2.51   | ..... | ..... | ..... |
| March.....   | 9.78   | 9.06   | 7.04   | .....   | 7.32   | \$6.00 | 5.14   | 2.99   | ..... | ..... | ..... |
| April.....   | 9.15   | 8.51   | 7.15   | \$13.22 | 7.26   | 6.25   | 5.40   | 3.24   | ..... | ..... | ..... |
| May.....     | 9.85   | 9.45   | 7.50   | 11.10   | 7.84   | .....  | 5.45   | 3.25   | ..... | ..... | ..... |
| June.....    | 9.50   | 9.13   | 6.13   | 10.74   | 7.41   | .....  | 3.48   | 1.75   | ..... | ..... | ..... |
| July.....    | 8.64   | .....  | 5.76   | .....   | 5.63   | 4.63   | 3.56   | 1.87   | ..... | ..... | ..... |
| August.....  | 8.08   | .....  | 5.44   | .....   | 5.56   | 4.62   | 3.62   | 1.83   | ..... | ..... | ..... |
| September..  | 7.62   | .....  | 5.33   | .....   | 4.94   | 4.11   | 3.49   | 1.81   | ..... | ..... | ..... |
| October..... | 7.67   | .....  | 5.40   | .....   | 5.25   | 4.40   | 3.59   | 1.88   | ..... | ..... | ..... |
| November.... | 8.29   | .....  | 5.91   | .....   | 5.87   | 4.48   | 3.30   | 1.73   | ..... | ..... | ..... |
| December.... | 9.95   | .....  | 7.56   | .....   | 7.39   | 4.90   | 4.09   | 2.08   | ..... | ..... | ..... |
| Average..    | 8.94   | 8.83   | 6.41   | .....   | 6.62   | 4.91   | 4.14   | 2.29   | ..... | ..... | ..... |

1 Five months average. 2 Six months average. 3 Eleven months average. 4 Eight months average.

## SHEEP—Continued.

TABLE 349.—*Sheep: Yearly receipts at principal markets, and at all markets, 1900 to 1921.*

[In thousands—i. e., 000 omitted.]

| Year.     | Receipts at principal and other markets. <sup>1</sup> |              |        |           |                 |             |         |             |             |        | Total, all markets. <sup>2</sup> |
|-----------|---|--------------|--------|-----------|-----------------|-------------|---------|-------------|-------------|--------|----------------------------------|
|           | Chicago.  | Kansas City. | Omaha. | St. Paul. | East St. Louis. | Fort Worth. | Denver. | Sioux City. | St. Joseph. | Total. |                                  |
| 1900..... | 3,540   | 860          | 1,277  | 490       | 416             | (3)         | 306     | 61          | 390         | 7,349  | .....                            |
| 1901..... | 4,044   | 1,980        | 1,315  | 332       | 520             | (3)         | 226     | 67          | 528         | 8,010  | .....                            |
| 1902..... | 4,516   | 1,154        | 1,743  | 602       | 523             | 10          | 317     | 61          | 561         | 9,487  | .....                            |
| 1903..... | 4,583   | 1,132        | 1,864  | 876       | 528             | 125         | 465     | 42          | 599         | 10,234 | .....                            |
| 1904..... | 4,505   | 1,004        | 1,784  | 773       | 688             | 104         | 519     | 28          | 794         | 10,169 | .....                            |
| 1905..... | 4,737   | 1,310        | 1,971  | 818       | 645             | 125         | 738     | 57          | 981         | 11,391 | .....                            |
| 1906..... | 4,805   | 1,617        | 2,185  | 735       | 579             | 98          | 826     | 64          | 827         | 11,716 | .....                            |
| 1907..... | 4,218   | 1,582        | 2,039  | 568       | 565             | 113         | 828     | 65          | 784         | 10,742 | .....                            |
| 1908..... | 4,352   | 1,641        | 2,106  | 359       | 679             | 120         | 675     | 59          | 592         | 10,583 | .....                            |
| 1909..... | 4,441   | 1,645        | 2,167  | 496       | 776             | 188         | 632     | 78          | 621         | 11,044 | .....                            |
| 1910..... | 5,229   | 1,841        | 2,985  | 865       | 736             | 163         | 600     | 151         | 560         | 13,130 | .....                            |
| 1911..... | 5,736   | 2,175        | 2,978  | 712       | 990             | 187         | 617     | 212         | 718         | 14,325 | .....                            |
| 1912..... | 6,056   | 2,134        | 2,951  | 628       | 1,081           | 284         | 775     | 207         | 739         | 14,795 | .....                            |
| 1913..... | 5,903   | 2,095        | 3,222  | 785       | 950             | 328         | 623     | 271         | 812         | 14,989 | .....                            |
| 1914..... | 5,378   | 2,002        | 3,114  | 795       | 749             | 403         | 691     | 404         | 830         | 14,371 | .....                            |
| 1915..... | 3,510   | 1,815        | 3,268  | 704       | 648             | 363         | 765     | 337         | 873         | 12,268 | .....                            |
| 1916..... | 4,291   | 1,758        | 3,171  | 623       | 671             | 431         | 1,409   | 321         | 804         | 13,479 | 8,147                            |
| 1917..... | 3,595   | 1,499        | 3,017  | 430       | 531             | 406         | 2,060   | 287         | 679         | 12,484 | 7,732                            |
| 1918..... | 4,630   | 1,687        | 3,386  | 630       | 536             | 335         | 1,652   | 337         | 827         | 14,060 | 8,435                            |
| 1919..... | 5,244   | 1,945        | 3,789  | 912       | 724             | 453         | 2,087   | 686         | 1,007       | 16,847 | 10,409                           |
| 1920..... | 4,005   | 1,687        | 2,891  | 729       | 605             | 394         | 2,079   | 358         | 843         | 13,591 | 9,947                            |
| 1921..... | 4,734   | 1,780        | 2,753  | 633       | 636             | 357         | 1,468   | 288         | 931         | 13,580 | 10,588                           |

<sup>1</sup> Prior to 1915 receipts compiled from yearbooks of stockyard companies.<sup>2</sup> Figures not obtainable prior to 1915.<sup>3</sup> Not in operation.TABLE 350.—*Sheep: Monthly and yearly receipts at Chicago, Kansas City, Omaha, and East St. Louis combined, 1910 to 1921.<sup>1</sup>*

[In thousands—i. e., 000 omitted.]

| Year.                | Jan.  | Feb. | Mar. | Apr. | May. | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec. | Total. |
|----------------------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|--------|
| 1910.....            | 651   | 522  | 551  | 477  | 577  | 631   | 794   | 1,199 | 1,609 | 1,820 | 1,258 | 702  | 10,791 |
| 1911.....            | 822   | 698  | 740  | 686  | 763  | 796   | 807   | 1,085 | 1,566 | 2,003 | 1,115 | 810  | 11,679 |
| 1912.....            | 1,020 | 849  | 856  | 770  | 665  | 671   | 837   | 1,082 | 1,528 | 1,906 | 1,113 | 905  | 12,172 |
| 1913.....            | 892   | 750  | 710  | 770  | 737  | 732   | 831   | 963   | 1,809 | 1,848 | 1,089 | 979  | 12,170 |
| 1914.....            | 934   | 863  | 909  | 858  | 707  | 716   | 723   | 979   | 1,553 | 1,512 | 705   | 779  | 11,243 |
| 1915.....            | 799   | 670  | 723  | 540  | 499  | 531   | 637   | 931   | 1,337 | 1,000 | 898   | 736  | 9,241  |
| 1916.....            | 742   | 697  | 632  | 586  | 632  | 659   | 634   | 991   | 1,301 | 1,403 | 854   | 761  | 9,592  |
| 1917.....            | 796   | 693  | 662  | 592  | 441  | 470   | 526   | 650   | 1,111 | 1,210 | 715   | 756  | 8,642  |
| 1918.....            | 716   | 525  | 620  | 518  | 538  | 554   | 726   | 989   | 1,770 | 1,569 | 952   | 741  | 10,218 |
| 1919.....            | 780   | 547  | 564  | 623  | 612  | 742   | 1,098 | 1,461 | 1,968 | 1,400 | 951   | 957  | 11,703 |
| 1920.....            | 666   | 619  | 580  | 462  | 532  | 632   | 827   | 1,189 | 1,288 | 944   | 817   | 631  | 9,189  |
| 1921.....            | 813   | 700  | 819  | 754  | 729  | 725   | 645   | 1,100 | 1,173 | 1,065 | 686   | 664  | 9,903  |
| 12-year average..... | 803   | 677  | 699  | 636  | 617  | 655   | 767   | 1,049 | 1,506 | 1,476 | 927   | 785  | 10,557 |

<sup>1</sup> Prior to 1915 compiled from yearbooks of stockyard companies.

## SHEEP—Continued.

TABLE 350A.—Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards in United States, 1915 to 1921.

[In thousands—i. e., 000 omitted.]

| Year.     | Cattle.   |                  |                               | Hogs.     |                  |                               | Sheep.    |                  |                               |
|-----------|-----------|------------------|-------------------------------|-----------|------------------|-------------------------------|-----------|------------------|-------------------------------|
|           | Receipts. | Local slaughter. | Stocker and feeder shipments. | Receipts. | Local slaughter. | Stocker and feeder shipments. | Receipts. | Local slaughter. | Stocker and feeder shipments. |
| 1915..... | 14,553    | 7,912            | ( <sup>1</sup> )              | 36,213    | 24,893           | ( <sup>1</sup> )              | 18,435    | 10,254           | ( <sup>1</sup> )              |
| 1916..... | 17,676    | 10,294           | 3,847                         | 43,265    | 30,984           | 194                           | 20,692    | 11,228           | 3,277                         |
| 1917..... | 23,066    | 13,275           | 4,803                         | 38,042    | 25,440           | 788                           | 20,216    | 9,142            | 4,448                         |
| 1918..... | 25,295    | 14,874           | 5,013                         | 44,863    | 30,441           | 989                           | 22,485    | 10,266           | 5,208                         |
| 1919..... | 24,624    | 13,633           | 5,286                         | 44,469    | 30,018           | 902                           | 27,256    | 12,640           | 6,956                         |
| 1920..... | 22,197    | 12,194           | 4,102                         | 42,121    | 26,761           | 728                           | 23,538    | 10,961           | 5,180                         |
| 1921..... | 19,787    | 11,078           | 3,504                         | 41,101    | 26,335           | 499                           | 24,168    | 12,853           | 3,095                         |

<sup>1</sup> Complete information for 1915 and 1916 particularly on disposition of stock is not obtainable from many markets.

TABLE 351.—Sheep: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919-1921.

[In thousands—i. e., 000 omitted.]

| Stockyards.              | Receipts.        |                  |                  | Local slaughter. |                  |                  | Stocker and feeder shipments. |                  |                  |
|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------------------|------------------|------------------|
|                          | 1919             | 1920             | 1921             | 1919             | 1920             | 1921             | 1919                          | 1920             | 1921             |
| Albany, N. Y.....        | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | —                             | —                | —                |
| Amarillo, Tex.....       | 236              | 189              | 38               | —                | —                | —                | 116                           | 86               | 23               |
| Atlanta, Ga.....         | 2                | 1                | 2                | 1                | 1                | 1                | ( <sup>1</sup> )              | —                | ( <sup>1</sup> ) |
| Augusta, Ga.....         | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Baltimore, Md.....       | 371              | 367              | 466              | 108              | 121              | 186              | 2                             | 1                | ( <sup>1</sup> ) |
| Billings, Mont.....      | 77               | 26               | 3                | ( <sup>1</sup> ) | —                | 1                | 17                            | 9                | —                |
| Birmingham, Ala.....     | 1                | 1                | 1                | ( <sup>1</sup> ) | 1                | 1                | ( <sup>1</sup> )              | —                | —                |
| Boston, Mass.....        | 4                | 5                | 2                | —                | —                | —                | —                             | —                | —                |
| Buffalo, N. Y.....       | 1,100            | 1,052            | 1,380            | 231              | 263              | 243              | 14                            | 23               | 4                |
| Chattanooga, Tenn.....   | 3                | 2                | 3                | 2                | 2                | 3                | 1                             | ( <sup>1</sup> ) | —                |
| Cheyenne, Wyo.....       | 442              | 223              | 148              | —                | —                | —                | —                             | —                | —                |
| Chicago, Ill.....        | 5,244            | 4,005            | 4,734            | 3,935            | 2,803            | 3,383            | 1,106                         | 899              | 521              |
| Cincinnati, Ohio.....    | 335              | 306              | 438              | 84               | 81               | 121              | 8                             | 8                | 13               |
| Cleveland, Ohio.....     | 467              | 420              | 370              | 176              | 168              | 234              | 4                             | ( <sup>1</sup> ) | 4                |
| Columbia, S. C.....      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | —                             | —                | —                |
| Columbus, Ohio.....      | 1                | 1                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | —                             | —                | —                |
| Dallas, Tex.....         | ( <sup>1</sup> ) | 1                | 1                | ( <sup>1</sup> ) | 1                | 1                | —                             | —                | —                |
| Dayton, Ohio.....        | 11               | 9                | 7                | 4                | 6                | 5                | —                             | —                | —                |
| Denver, Colo.....        | 2,087            | 2,079            | 1,468            | 241              | 239              | 180              | 1,290                         | 1,840            | 643              |
| Detroit, Mich.....       | 344              | 328              | 343              | 212              | 216              | 168              | 8                             | 20               | 15               |
| Dublin, Ga.....          | ( <sup>1</sup> ) | ( <sup>1</sup> ) | —                | —                | —                | —                | ( <sup>1</sup> )              | —                | —                |
| East St. Louis, Ill..... | 724              | 605              | 636              | 599              | 405              | 391              | 70                            | 60               | 38               |
| El Paso, Tex.....        | 251              | 136              | 71               | 3                | 7                | 7                | 189                           | 95               | 21               |
| Emeryville, Calif.....   | 156              | 187              | 170              | 156              | 187              | 170              | —                             | —                | —                |
| Erie, Pa.....            | 38               | 38               | —                | 4                | 1                | —                | —                             | —                | —                |
| Evansville, Ind.....     | 14               | 14               | 8                | 1                | 3                | 3                | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Ft. Worth, Tex.....      | 453              | 394              | 357              | 164              | 206              | 157              | 164                           | 71               | 80               |
| Forstoria, Ohio.....     | 11               | 17               | 21               | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> )              | 1                | 1                |
| Indianapolis, Ind.....   | 131              | 136              | 145              | 26               | 31               | 44               | —                             | 6                | 10               |
| Jacksonville, Fla.....   | 2                | 1                | ( <sup>1</sup> ) | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                             | 1                | —                |
| Jersey City, N. J.....   | 1,532            | 1,554            | 1,994            | 1,532            | 1,554            | 1,994            | —                             | —                | —                |
| Kansas City, Mo.....     | 1,945            | 1,687            | 1,730            | 1,176            | 1,066            | 1,307            | 672                           | 474              | 324              |
| Knoxville, Tenn.....     | 2                | 1                | 1                | 1                | 1                | 1                | 1                             | ( <sup>1</sup> ) | —                |
| La Fayette, Ind.....     | 8                | 8                | 8                | 2                | 1                | 2                | 1                             | 1                | 1                |
| Lancaster, Pa.....       | 74               | 122              | 12               | 1                | 2                | 2                | —                             | —                | —                |

<sup>1</sup> Less than 500.

09912°—YRK 1921—



## SHEEP—Continued.

TABLE 351.—*Sheep: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919-1921—Continued.*

[In thousands—i. e., 000 omitted.]

| Stockyards.           | Receipts.        |        |                  | Local slaughter. |                  |                  | Stocker and feeder shipments. |                  |                  |
|-----------------------|------------------|--------|------------------|------------------|------------------|------------------|-------------------------------|------------------|------------------|
|                       | 1919             | 1920   | 1921             | 1919             | 1920             | 1921             | 1919                          | 1920             | 1921             |
| Logansport, Ind.      | ( <sup>1</sup> ) | 1      | 1                |                  | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Louisville, Ky.       | 273              | 277    | 286              | 24               | 29               | 26               | 31                            | 20               | 25               |
| Marion, Ohio.         | 32               | 50     | 15               | ( <sup>1</sup> ) | 1                | ( <sup>1</sup> ) | 2                             | 1                | 1                |
| Memphis, Tenn.        | 1                | 2      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                               |                  | ( <sup>1</sup> ) |
| Milwaukee, Wis.       | 65               | 61     | 59               | 42               | 45               | 46               | 1                             | 1                |                  |
| Montgomery, Ala.      | 7                | 4      | 2                | 1                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> )              | 1                | ( <sup>1</sup> ) |
| Moultrie, Ga.         | 1                |        | 1                |                  |                  | ( <sup>1</sup> ) |                               |                  |                  |
| Nashville, Tenn.      | 147              | 129    | 138              | 15               | 18               | 23               | 19                            | 6                | 4                |
| Nebraska City, Nebr.  | 1                | 1      | ( <sup>1</sup> ) |                  |                  |                  | 1                             | ( <sup>1</sup> ) |                  |
| New Brighton, Minn.   | 276              | 166    | 208              |                  |                  |                  | 33                            | 3                | 75               |
| New Orleans, La.      | 6                | 6      | 5                | 4                | 3                | 3                | 1                             | 1                | 1                |
| New York, N. Y.       | 291              | 158    | 221              | 291              | 158              | 221              |                               |                  |                  |
| Ogden, Utah.          | 516              | 603    | 575              | 24               | 17               | 14               | 171                           | 183              | 166              |
| Oklahoma, Okla.       | 19               | 15     | 18               | 8                | 5                | 12               | 6                             | 3                | 2                |
| Omaha, Nebr.          | 3,789            | 2,891  | 2,753            | 1,639            | 1,417            | 1,626            | 1,787                         | 1,124            | 670              |
| Pasco, Wash.          | 131              | 92     | 72               | ( <sup>1</sup> ) |                  |                  | 131                           | 68               |                  |
| Peoria, Ill.          | 4                | 3      | 7                | 1                | 2                | 3                | 1                             | ( <sup>1</sup> ) | 4                |
| Philadelphia, Pa.     | 298              | 349    | 454              | 286              | 343              | 446              |                               |                  |                  |
| Pittsburgh, Pa.       | 767              | 922    | 1,197            | 103              | 125              | 148              |                               |                  |                  |
| Portland, Oreg.       | 215              | 236    | 329              | 109              | 104              | 151              | 27                            | 40               | 13               |
| Pueblo, Colo.         | 837              | 734    | 541              |                  |                  |                  | ( <sup>1</sup> )              | 1                | ( <sup>1</sup> ) |
| Richmond, Va.         | 10               | 10     | 13               | 6                | 7                | 10               | 2                             | 1                | 1                |
| St. Joseph, Mo.       | 1,007            | 843    | 931              | 706              | 615              | 730              | 200                           | 142              | 107              |
| St. Paul, Minn.       | 912              | 729    | 633              | 251              | 300              | 316              | 201                           | 113              | 78               |
| Salt Lake City, Utah. | 358              | 431    | 368              | 17               | 15               | 67               | 277                           | 211              | 142              |
| San Antonio, Tex.     | 88               | 70     | 49               | 1                | 2                | 2                | 46                            | 33               | 5                |
| Seattle, Wash.        | 102              | 81     | 91               | 101              | 90               | 91               |                               |                  |                  |
| Sioux City, Iowa.     | 686              | 358    | 288              | 282              | 199              | 191              | 272                           | 90               | 64               |
| Sioux Falls, S. Dak.  | 87               | 5      | 2                | ( <sup>1</sup> ) | 2                | 1                | 28                            | 1                | ( <sup>1</sup> ) |
| Spokane, Wash.        | 117              | 127    | 73               | 13               | 16               | 26               | 35                            | 75               | 12               |
| Tacoma, Wash.         | 33               | 44     | 55               | 37               | 37               | 55               | 1                             | 2                | ( <sup>1</sup> ) |
| Toledo, Ohio.         | 54               | 69     | 32               | 4                | 2                | 3                | ( <sup>1</sup> )              | 3                | ( <sup>1</sup> ) |
| Washington, D. C.     | 20               | 27     | 35               | 20               | 27               | 34               |                               |                  |                  |
| Wichita, Kans.        | 59               | 39     | 32               | 6                | 5                | 6                | 19                            | 3                | 2                |
| Total.                | 27,256           | 23,538 | 24,168           | 12,646           | 10,981           | 12,858           | 6,966                         | 5,180            | 3,095            |

<sup>1</sup> Less than 500.TABLE 352.—*Sheep: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921.*

[In thousands—i. e., 000 omitted.]

| Stockyards.                   | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total. |
|-------------------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|--------|
| Chicago, Ill.:                |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.                     | 409  | 342  | 429  | 365  | 330  | 330   | 273   | 440  | 534   | 542  | 395  | 345  | 4,734  |
| Local slaughter.              | 295  | 242  | 305  | 260  | 255  | 299   | 236   | 343  | 318   | 363  | 263  | 214  | 3,383  |
| Stocker and feeder shipments. | 16   | 12   | 10   | 6    | 6    | 15    | 10    | 46   | 141   | 143  | 90   | 26   | 521    |
| Kansas City, Mo.:             |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.                     | 163  | 143  | 152  | 152  | 192  | 108   | 94    | 166  | 199   | 198  | 96   | 117  | 1,780  |
| Local slaughter.              | 130  | 120  | 130  | 122  | 133  | 97    | 74    | 113  | 142   | 127  | 57   | 62   | 1,307  |
| Stocker and feeder shipments. | 15   | 13   | 11   | 16   | 38   | 14    | 14    | 35   | 56    | 55   | 30   | 27   | 324    |
| Omaha, Nebr.:                 |      |      |      |      |      |       |       |      |       |      |      |      |        |
| Receipts.                     | 188  | 185  | 215  | 209  | 139  | 168   | 207   | 414  | 400   | 313  | 157  | 158  | 2,753  |
| Local slaughter.              | 151  | 134  | 165  | 150  | 116  | 130   | 139   | 214  | 157   | 137  | 85   | 48   | 1,626  |
| Stocker and feeder shipments. | 8    | 7    | 8    | 1    | 6    | 19    | 42    | 161  | 204   | 161  | 29   | 24   | 670    |

SHEEP—Continued.

TABLE 352.—*Sheep: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921—Continued.*

[In thousands—1 e., 000 omitted.]

| Stockyards.                       | Jan.  | Feb.  | Mar.  | Apr.  | May   | June | July | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Total. |
|-----------------------------------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|--------|
| East St. Louis, Ill.:             |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 53    | 30    | 23    | 28    | 68    | 119  | 71   | 80    | 40    | 42    | 38    | 44    | 636    |
| Local slaughter..                 | 41    | 20    | 15    | 14    | 33    | 66   | 44   | 57    | 25    | 30    | 25    | 21    | 391    |
| Stocker and feeder shipments..... | 3     | 1     | 1     | 1     | 2     | 3    | 2    | 5     | 4     | 3     | 2     | 6     | 33     |
| St. Paul, Minn.:                  |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 49    | 42    | 44    | 8     | 12    | 15   | 19   | 56    | 85    | 172   | 94    | 37    | 633    |
| Local slaughter..                 | 24    | 13    | 14    | 6     | 8     | 8    | 13   | 35    | 42    | 68    | 65    | 20    | 316    |
| Stocker and feeder shipments..... | 4     | 2     | 2     | (1)   | 1     | 1    | 1    | 4     | 14    | 34    | 13    | 2     | 78     |
| Fort Worth, Tex.:                 |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 11    | 8     | 11    | 44    | 88    | 24   | 31   | 36    | 17    | 32    | 21    | 34    | 357    |
| Local slaughter..                 | 5     | 5     | 7     | 26    | 29    | 20   | 20   | 13    | 10    | 10    | 8     | 4     | 157    |
| Stocker and feeder shipments..... | 2     | 1     | 3     | 4     | 5     | 4    | 4    | 3     | 4     | 20    | 8     | 22    | 80     |
| Sioux City, Iowa:                 |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 27    | 17    | 16    | 18    | 10    | 11   | 8    | 22    | 35    | 54    | 43    | 27    | 288    |
| Local slaughter..                 | 22    | 15    | 15    | 15    | 10    | 8    | 5    | 14    | 16    | 27    | 31    | 13    | 191    |
| Stocker and feeder shipments..... | 1     | 1     | 1     | 1     | (1)   | 3    | 3    | 7     | 17    | 18    | 7     | 5     | 64     |
| Jersey City, N. J.:               |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 143   | 133   | 125   | 134   | 164   | 201  | 194  | 224   | 158   | 234   | 162   | 122   | 1,994  |
| Local slaughter..                 | 143   | 133   | 125   | 134   | 164   | 201  | 194  | 224   | 158   | 234   | 162   | 122   | 1,994  |
| St. Joseph, Mo.:                  |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 92    | 82    | 94    | 99    | 64    | 66   | 52   | 90    | 97    | 67    | 56    | 72    | 931    |
| Local slaughter..                 | 76    | 66    | 68    | 71    | 57    | 59   | 44   | 62    | 66    | 52    | 50    | 59    | 730    |
| Stocker and feeder shipments..... | 5     | 2     | 2     | 2     | 5     | 5    | 6    | 24    | 25    | 13    | 6     | 12    | 107    |
| Indianapolis, Ind.:               |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 10    | 6     | 4     | 2     | 7     | 22   | 17   | 26    | 18    | 12    | 10    | 11    | 145    |
| Local slaughter..                 | 2     | 1     | 2     | 1     | 2     | 7    | 6    | 7     | 6     | 4     | 3     | 3     | 44     |
| Stocker and feeder shipments..... | (1)   | (1)   | (1)   | (1)   | (1)   | 1    | 2    | 3     | 2     | 1     | (1)   | (1)   | 10     |
| Buffalo, N. Y.:                   |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 166   | 133   | 144   | 126   | 81    | 46   | 59   | 83    | 96    | 147   | 156   | 143   | 1,380  |
| Local slaughter..                 | 24    | 22    | 23    | 18    | 12    | 10   | 12   | 23    | 22    | 27    | 27    | 23    | 243    |
| Stocker and feeder shipments..... | 1     | (1)   | 1     | (1)   | (1)   | (1)  | (1)  | 1     | (1)   | 1     | ----- | ----- | 4      |
| Pittsburgh, Pa.:                  |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 97    | 61    | 80    | 100   | 77    | 127  | 154  | 143   | 99    | 82    | 64    | 113   | 1,197  |
| Local slaughter..                 | 11    | 10    | 11    | 12    | 15    | 13   | 14   | 12    | 12    | 14    | 12    | 12    | 148    |
| Denver, Colo.:                    |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 65    | 95    | 139   | 111   | 53    | 28   | 68   | 87    | 150   | 338   | 263   | 66    | 1,468  |
| Local slaughter..                 | 17    | 17    | 20    | 15    | 11    | 9    | 11   | 15    | 16    | 28    | 15    | 6     | 180    |
| Stocker and feeder shipments..... | 23    | 14    | 24    | 12    | 2     | 7    | 26   | 5     | 37    | 193   | 253   | 47    | 643    |
| Cincinnati, Ohio:                 |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 7     | 4     | 6     | 5     | 45    | 116  | 99   | 81    | 30    | 19    | 14    | 12    | 438    |
| Local slaughter..                 | 4     | 4     | 5     | 4     | 14    | 10   | 14   | 17    | 16    | 13    | 11    | 9     | 121    |
| Stocker and feeder shipments..... | (1)   | ----- | (1)   | (1)   | ----- | 1    | 1    | 5     | 4     | 1     | (1)   | (1)   | 13     |
| Oklahoma, Okla.:                  |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 1     | 1     | 2     | 1     | 2     | 1    | 2    | 3     | 1     | 1     | 2     | 1     | 18     |
| Local slaughter..                 | (1)   | 1     | 2     | 1     | 1     | 1    | 2    | 1     | (1)   | 1     | 1     | 1     | 12     |
| Stocker and feeder shipments..... | ----- | ----- | ----- | ----- | (1)   | 1    | (1)  | (1)   | 1     | ----- | (1)   | (1)   | 2      |
| Cleveland, Ohio:                  |       |       |       |       |       |      |      |       |       |       |       |       |        |
| Receipts.....                     | 37    | 17    | 23    | 27    | 20    | 20   | 22   | 28    | 32    | 46    | 51    | 47    | 370    |
| Local slaughter..                 | 21    | 15    | 16    | 19    | 15    | 16   | 18   | 21    | 19    | 27    | 23    | 24    | 234    |
| Stocker and feeder shipments..... | ----- | ----- | ----- | ----- | 1     | 1    | (1)  | ----- | 1     | 1     | 1     | ----- | 4      |

<sup>1</sup> Less than 500.

## SHEEP—Continued.

TABLE 353.—Mutton: Yearly exports and imports, by principal countries.

[In thousands of pounds—i. e., 000 omitted.]

## EXPORTS.

| Country.                     | 1910    | 1911    | 1912    | 1913    | 1914    | 1915    | 1916    | 1917    | 1918             | 1919             | 1920             |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|------------------|------------------|------------------|
| <i>Exported by—</i>          |         |         |         |         |         |         |         |         |                  |                  |                  |
| Argentina.....               | 165,589 | 189,411 | 154,708 | 101,253 | 129,384 | 77,250  | 113,136 | 87,787  | 111,145          | 125,131          | ( <sup>1</sup> ) |
| Australia <sup>2</sup> ..... | 190,229 | 129,569 | 115,372 | 204,932 | 193,264 | 38,344  | 66,813  | 19,175  | 59,687           | 246,971          | ( <sup>1</sup> ) |
| British South Africa.....    |         | 67      | 130     | 28      | 112     | 323     | 1       | 2       | ( <sup>b</sup> ) | 46               | ( <sup>b</sup> ) |
| Canada.....                  | 70      | 50      | 35      | 58      | 1,056   | 83      | 188     | 844     | 731              | 4,939            | 8,660            |
| Denmark.....                 |         | 348     | 422     | 263     | 209     | 810     | 365     |         |                  | 282              | 1,135            |
| France.....                  |         | 284     | 319     | 399     | 247     | 232     | 229     | 132     | 114              | 134              | 995              |
| Netherlands.....             |         | 15,505  | 21,063  | 15,080  | 19,894  | 25,150  | 4,857   | 4,125   | 2                | 5,286            | 7,011            |
| New Zealand.....             | 227,865 | 211,595 | 243,589 | 246,363 | 280,324 | 302,213 | 251,245 | 169,644 | 139,575          | 329,693          | 428,000          |
| Russia.....                  | 618     | 361     | 310     | 423     | 105     | 125     |         |         |                  |                  |                  |
| Sweden.....                  |         | 109     | 78      | 113     | 152     | 54      | 2       | 5       | 1                | ( <sup>b</sup> ) | ( <sup>b</sup> ) |
| United States.....           | 1,997   | 2,574   | 5,076   | 4,789   | 3,847   | 4,231   | 5,258   | 2,862   | 1,631            | 3,009            | 3,575            |
| Uruguay.....                 | 8,092   | 6,476   | 3,309   |         | 5,356   | 7,806   | 8,088   | 4,589   | 5,919            | ( <sup>1</sup> ) | ( <sup>1</sup> ) |

## IMPORTS.

|                           |         |         |         |         |         |         |         |                  |         |                  |                  |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|------------------|---------|------------------|------------------|
| <i>Imported by—</i>       |         |         |         |         |         |         |         |                  |         |                  |                  |
| British South Africa..... |         | 2,746   | 1,402   | 1,593   | 162     | 24      |         | 20               |         | 175              | 1,975            |
| Canada.....               |         | 3,409   | 5,393   | 5,410   | 4,194   | 2,908   | 2,786   | 2,008            | 5,311   | 4,743            | 7,406            |
| Cuba.....                 |         | 23      | 18      | 83      | 52      | 50      | 13      | 22               | 81      | 67               | ( <sup>1</sup> ) |
| Denmark.....              | 4,005   | 4,055   | 3,072   | 4,357   | 2,913   | 803     |         | ( <sup>b</sup> ) |         | 835              | 1,340            |
| France.....               | 155     | 622     | 1,194   | 975     | 6,340   | 20,409  | 29,309  | 35,172           | 20,944  | 63,448           | 37,405           |
| Germany.....              | 651     | 458     | 716     | 1,033   |         |         |         |                  |         |                  | 4,971            |
| Netherlands.....          | 19      | 116     | 69      | 42      | 49      | 10      | 40      | 2,965            | 13      | 1,224            | 1,116            |
| Sweden.....               | 1,268   | 1,331   | 1,384   | 938     | 522     | 116     | 26      | 3                | 37      | ( <sup>b</sup> ) | ( <sup>b</sup> ) |
| United Kingdom.....       | 622,296 | 611,868 | 574,698 | 604,132 | 577,339 | 527,517 | 406,814 | 292,922          | 237,862 | 478,987          | 742,601          |
| United States.....        |         |         |         | 554     | 19,876  | 11,879  | 17,235  | 5,624            | 608     | 8,209            | 101,168          |

<sup>1</sup> Not yet available.<sup>2</sup> Less than 500 pounds.<sup>b</sup> Not separately stated.<sup>2</sup> Year beginning July 1.<sup>c</sup> Tallow.

## WOOL.

TABLE 354.—Wool: Yearly estimated production, by countries and grand divisions.

[In millions of pounds—i. e., 000,000 omitted.]

| Country.                 | 1910  | 1911  | 1912  | 1913  | 1914  | 1915  | 1916  | 1917  | 1918  | 1919  | 1920  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Australasia.....         | 834   | 820   | 833   | 750   | 827   | 767   | 645   | 742   | 742   | 825   | 852   |
| South America.....       | 586   | 500   | 555   | 531   | 455   | 477   | 480   | 470   | 470   | 484   | 487   |
| North America.....       | 341   | 338   | 322   | 315   | 309   | 303   | 307   | 304   | 313   | 336   | 323   |
| United Kingdom.....      | 142   | 143   | 143   | 133   | 125   | 121   | 121   | 121   | 125   | 118   | 99    |
| Russia in Europe.....    | 320   | 320   | 320   | 320   | 320   | 320   | 320   | 320   | 320   | 320   | 150   |
| France.....              | 78    | 78    | 78    | 78    | 80    | 75    | 75    | 65    | 65    | 50    | 50    |
| Germany.....             | 26    | 26    | 26    | 26    | 26    | 26    | 26    | 26    | 26    | 26    | 37    |
| Italy.....               | 21    | 22    | 21    | 22    | 22    | 22    | 22    | 22    | 22    | 22    | 35    |
| All other in Europe..... | 225   | 225   | 225   | 225   | 227   | 239   | 240   | 240   | 240   | 236   | 380   |
| Asia.....                | 218   | 273   | 273   | 273   | 273   | 273   | 273   | 273   | 273   | 327   | 327   |
| Africa.....              | 162   | 175   | 175   | 208   | 208   | 208   | 208   | 208   | 208   | 150   | 220   |
| Total.....               | 2,953 | 2,920 | 2,971 | 2,881 | 2,872 | 2,836 | 2,717 | 2,791 | 2,809 | 2,894 | 2,965 |

Source: Annual Wool Review of the National Association of Wool Manufacturers.

WOOL—Continued.

TABLE 355.—Wool: Estimated production, 1919–1921.

| State.              | Production (000 omitted). |         |         | Weight per fleece. |      |      | Number of fleeces (000 omitted). |        |        |
|---------------------|---------------------------|---------|---------|--------------------|------|------|----------------------------------|--------|--------|
|                     | 1919                      | 1920    | 1921    | 1919               | 1920 | 1921 | 1919                             | 1920   | 1921   |
|                     | Lbs.                      | Lbs.    | Lbs.    | Lbs.               | Lbs. | Lbs. |                                  |        |        |
| Maine.....          | 725                       | 760     | 660     | 6.4                | 6.4  | 6.0  | 113                              | 119    | 110    |
| New Hampshire.....  | 180                       | 182     | 155     | 6.6                | 6.5  | 6.7  | 27                               | 28     | 23     |
| Vermont.....        | 438                       | 430     | 399     | 7.2                | 7.2  | 6.3  | 61                               | 60     | 63     |
| Massachusetts.....  | 90                        | 95      | 95      | 6.6                | 6.5  | 6.0  | 14                               | 15     | 16     |
| Rhode Island.....   | 15                        | 14      | 13      | 5.8                | 6.1  | 5.9  | 3                                | 2      | 2      |
| Connecticut.....    | 56                        | 63      | 57      | 5.9                | 5.6  | 6.0  | 9                                | 11     | 10     |
| New York.....       | 3,351                     | 3,291   | 2,941   | 7.0                | 6.9  | 6.7  | 479                              | 477    | 439    |
| New Jersey.....     | 58                        | 60      | 55      | 7.0                | 7.0  | 6.0  | 8                                | 9      | 9      |
| Pennsylvania.....   | 3,444                     | 3,532   | 3,403   | 7.0                | 6.5  | 6.4  | 492                              | 551    | 532    |
| Delaware.....       | 16                        | 17      | 16      | 5.7                | 5.8  | 3.5  | 3                                | 3      | 5      |
| Maryland.....       | 551                       | 552     | 523     | 6.0                | 6.0  | 6.0  | 92                               | 94     | 87     |
| Virginia.....       | 1,520                     | 1,596   | 1,558   | 5.0                | 4.6  | 4.6  | 304                              | 347    | 339    |
| West Virginia.....  | 2,000                     | 2,500   | 2,300   | 5.3                | 5.0  | 4.9  | 491                              | 500    | 469    |
| North Carolina..... | 380                       | 420     | 395     | 4.4                | 4.2  | 4.2  | 86                               | 100    | 94     |
| South Carolina..... | 103                       | 101     | 97      | 4.3                | 4.5  | 3.5  | 24                               | 22     | 28     |
| Georgia.....        | 167                       | 165     | 160     | 3.1                | 3.2  | 2.8  | 54                               | 52     | 57     |
| Florida.....        | 162                       | 157     | 150     | 3.5                | 3.2  | 3.1  | 46                               | 49     | 48     |
| Ohio.....           | 15,265                    | 14,500  | 13,200  | 7.5                | 7.4  | 7.2  | 2,035                            | 1,959  | 1,833  |
| Indiana.....        | 4,069                     | 3,654   | 3,458   | 7.4                | 7.0  | 7.0  | 550                              | 522    | 494    |
| Illinois.....       | 4,133                     | 3,974   | 3,578   | 8.0                | 7.8  | 7.6  | 523                              | 509    | 471    |
| Michigan.....       | 7,836                     | 8,385   | 7,714   | 7.4                | 7.6  | 7.2  | 1,059                            | 1,103  | 1,071  |
| Wisconsin.....      | 3,310                     | 3,219   | 2,818   | 7.6                | 7.4  | 7.0  | 438                              | 435    | 403    |
| Minnesota.....      | 3,054                     | 2,660   | 2,340   | 7.5                | 7.1  | 7.2  | 407                              | 375    | 325    |
| Iowa.....           | 5,682                     | 5,966   | 5,369   | 8.0                | 7.7  | 7.5  | 710                              | 775    | 716    |
| Missouri.....       | 7,706                     | 7,552   | 6,645   | 7.1                | 6.8  | 6.5  | 1,085                            | 1,111  | 1,022  |
| North Dakota.....   | 1,826                     | 1,899   | 1,633   | 7.7                | 7.5  | 7.7  | 237                              | 253    | 212    |
| South Dakota.....   | 5,222                     | 4,804   | 4,324   | 7.5                | 7.0  | 7.2  | 696                              | 686    | 601    |
| Nebraska.....       | 1,730                     | 1,886   | 1,641   | 7.9                | 8.0  | 7.4  | 219                              | 236    | 222    |
| Kansas.....         | 1,754                     | 2,087   | 1,878   | 7.6                | 7.5  | 7.0  | 231                              | 278    | 268    |
| Kentucky.....       | 3,211                     | 3,000   | 2,600   | 5.2                | 5.0  | 4.7  | 618                              | 600    | 553    |
| Tennessee.....      | 1,433                     | 1,452   | 1,320   | 4.8                | 4.8  | 4.5  | 309                              | 305    | 293    |
| Alabama.....        | 255                       | 292     | 189     | 4.2                | 4.0  | 3.0  | 61                               | 73     | 63     |
| Mississippi.....    | 500                       | 475     | 470     | 4.2                | 3.6  | 3.5  | 119                              | 132    | 134    |
| Louisiana.....      | 600                       | 600     | 508     | 3.9                | 3.9  | 3.7  | 154                              | 154    | 137    |
| Texas.....          | 14,986                    | 18,200  | 18,000  | 7.2                | 7.0  | 7.7  | 2,081                            | 2,600  | 2,338  |
| Oklahoma.....       | 526                       | 477     | 482     | 7.0                | 7.2  | 7.3  | 75                               | 66     | 66     |
| Arkansas.....       | 375                       | 394     | 355     | 4.9                | 4.5  | 4.3  | 77                               | 88     | 83     |
| Montana.....        | 18,267                    | 16,000  | 16,400  | 8.4                | 7.9  | 8.3  | 2,175                            | 2,025  | 1,976  |
| Wyoming.....        | 26,000                    | 21,000  | 21,500  | 8.5                | 8.3  | 8.2  | 3,359                            | 2,530  | 2,622  |
| Colorado.....       | 7,332                     | 6,888   | 6,839   | 6.6                | 6.7  | 7.0  | 1,111                            | 1,028  | 977    |
| New Mexico.....     | 11,600                    | 10,600  | 10,100  | 6.3                | 6.3  | 6.4  | 1,841                            | 1,683  | 1,878  |
| Arizona.....        | 5,400                     | 4,800   | 5,000   | 6.3                | 6.5  | 6.0  | 857                              | 738    | 833    |
| Utah.....           | 17,000                    | 16,150  | 16,500  | 7.4                | 7.8  | 8.0  | 2,297                            | 2,071  | 2,062  |
| Nevada.....         | 7,750                     | 7,600   | 7,000   | 7.6                | 7.3  | 7.3  | 1,020                            | 1,027  | 959    |
| Idaho.....          | 22,145                    | 18,650  | 16,800  | 8.4                | 8.1  | 8.0  | 2,636                            | 2,302  | 2,100  |
| Washington.....     | 5,779                     | 5,201   | 4,421   | 8.6                | 8.7  | 8.8  | 672                              | 598    | 502    |
| Oregon.....         | 16,039                    | 14,435  | 14,435  | 8.5                | 8.4  | 8.0  | 1,837                            | 1,718  | 1,078  |
| California.....     | 15,217                    | 14,800  | 14,070  | 7.4                | 7.6  | 7.5  | 2,056                            | 1,882  | 1,876  |
| United States.....  | 249,958                   | 235,005 | 224,564 | 7.4                | 7.3  | 7.3  | 33,899                           | 32,301 | 30,799 |

## WOOL—Continued.

TABLE 356.—Wool (unwashed): Farm price, cents per pound, 15th of month, 1910-1921.

| Year.     | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------|------|------|------|------|------|-------|-------|------|-------|------|------|------|
| 1910..... | 24.5 | 24.6 | 24.9 | 22.3 | 22.8 | 19.5  | 19.0  | 19.5 | 17.7  | 18.1 | 17.9 | 17.8 |
| 1911..... | 17.3 | 17.3 | 18.8 | 15.7 | 14.7 | 15.5  | 15.4  | 16.0 | 15.6  | 15.5 | 15.6 | 15.5 |
| 1912..... | 16.2 | 16.3 | 16.9 | 17.3 | 17.8 | 18.7  | 18.9  | 18.8 | 18.7  | 18.5 | 18.6 | 18.6 |
| 1913..... | 18.6 | 18.7 | 18.4 | 17.7 | 16.3 | 15.6  | 15.9  | 15.8 | 15.8  | 15.5 | 15.6 | 16.1 |
| 1914..... | 15.7 | 15.7 | 16.4 | 16.8 | 17.2 | 18.4  | 18.5  | 18.7 | 18.6  | 18.0 | 18.1 | 18.6 |
| 1915..... | 18.6 | 20.2 | 22.8 | 22.7 | 22.0 | 23.7  | 24.2  | 23.8 | 23.3  | 22.7 | 22.7 | 23.3 |
| 1916..... | 23.3 | 24.2 | 25.9 | 26.3 | 28.0 | 28.7  | 28.6  | 29.0 | 28.4  | 28.7 | 29.4 | 30.8 |
| 1917..... | 31.8 | 32.7 | 36.7 | 38.8 | 43.7 | 49.8  | 54.3  | 54.8 | 54.2  | 55.5 | 55.9 | 58.2 |
| 1918..... | 58.1 | 57.1 | 60.0 | 60.0 | 58.2 | 57.4  | 57.5  | 57.4 | 57.7  | 57.7 | 56.4 | 56.2 |
| 1919..... | 55.2 | 51.1 | 51.3 | 47.9 | 48.0 | 50.5  | 51.8  | 52.2 | 51.3  | 50.6 | 51.0 | 51.6 |
| 1920..... | 53.8 | 52.5 | 51.5 | 51.8 | 50.3 | 38.6  | 29.5  | 28.3 | 28.0  | 27.5 | 24.9 | 21.9 |
| 1921..... | 19.6 | 19.8 | 18.9 | 17.9 | 16.0 | 15.4  | 15.5  | 15.4 | 15.5  | 15.8 | 15.6 | 16.9 |

TABLE 357.—Wool: Monthly and yearly average price per pound, Boston market, 1910 to 1921.

OHIO, PENNSYLVANIA, AND WEST VIRGINIA—FINE CLOTHING, UNWASHED.

| Year.                   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Yearly average. |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|
| 1910.....               | \$0.28 | \$0.28 | \$0.27 | \$0.25 | \$0.24 | \$0.22 | \$0.22 | \$0.21 | \$0.21 | \$0.23 | \$0.23 | \$0.23 | \$0.24          |
| 1911.....               | .23    | .22    | .21    | .20    | .19    | .19    | .20    | .20    | .21    | .21    | .21    | .22    | .21             |
| 1912.....               | .22    | .22    | .22    | .22    | .22    | .22    | .24    | .24    | .24    | .24    | .24    | .24    | .23             |
| 1913.....               | .24    | .24    | .23    | .22    | .21    | .21    | .21    | .21    | .21    | .21    | .21    | .21    | .22             |
| 1914.....               | .21    | .21    | .22    | .22    | .23    | .24    | .25    | .25    | .25    | .24    | .24    | .24    | .23             |
| 1915.....               | .25    | .29    | .29    | .26    | .26    | .26    | .27    | .27    | .27    | .27    | .27    | .27    | .27             |
| 1916.....               | .28    | .28    | .29    | .31    | .31    | .31    | .31    | .31    | .31    | .33    | .34    | .37    | .31             |
| 1917.....               | .39    | .42    | .45    | .44    | .47    | .55    | .58    | .63    | .66    | .63    | .65    | .65    | .54             |
| 1918.....               | .65    | .65    | .65    | .67    | .64    | .62    | .67    | .64    | .62    | .67    | .64    | .62    | .64             |
| 1919.....               | .57    | .56    | .54    | .53    | .53    | .58    | .68    | .70    | .70    | .67    | .68    | .70    | .62             |
| 1920 <sup>1</sup> ..... | .70    | .75    | .76    | .70    | .65    | .60    | .57    | .54    | .54    | .42    | .38    | .38    | .58             |
| 1921.....               | .31    | .31    | .32    | .32    | .31    | .30    | .28    | .28    | .28    | .25    | .29    | .31    | .30             |
| 12-year average...      | .36    | .37    | .37    | .36    | .36    | .36    | .37    | .37    | .38    | .37    | .36    | .37    | .37             |

<sup>1</sup> Prices June to December, 1920, largely nominal.

## TERRITORY—STAPLE, FINE, AND FINE MEDIUM, SCOURED.

| Year.                   | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Yearly average. |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|
| 1910.....               | \$0.74 | \$0.73 | \$0.71 | \$0.68 | \$0.63 | \$0.61 | \$0.61 | \$0.62 | \$0.62 | \$0.63 | \$0.63 | \$0.63 | \$0.65          |
| 1911.....               | .61    | .59    | .54    | .53    | .52    | .52    | .55    | .56    | .59    | .60    | .61    | .61    | .57             |
| 1912.....               | .61    | .61    | .61    | .61    | .61    | .61    | .63    | .63    | .63    | .63    | .67    | .67    | .64             |
| 1913.....               | .66    | .64    | .69    | .56    | .55    | .54    | .54    | .54    | .54    | .53    | .53    | .52    | .56             |
| 1914.....               | .52    | .56    | .57    | .59    | .60    | .61    | .61    | .68    | .61    | .59    | .61    | .61    | .59             |
| 1915.....               | .63    | .73    | .73    | .71    | .69    | .71    | .71    | .71    | .71    | .71    | .71    | .73    | .71             |
| 1916.....               | .74    | .77    | .77    | .79    | .79    | .81    | .82    | .85    | .89    | .89    | .97    | 1.05   | .84             |
| 1917.....               | 1.13   | 1.23   | 1.28   | 1.33   | 1.38   | 1.74   | 1.74   | 1.78   | 1.81   | 1.80   | 1.80   | 1.80   | 1.57            |
| 1918.....               | 1.80   | 1.80   | 1.83   | 1.85   | 1.80   | 1.80   | 1.85   | 1.80   | 1.80   | 1.85   | 1.80   | 1.80   | 1.82            |
| 1919.....               | 1.60   | 1.52   | 1.58   | 1.65   | 1.65   | 1.75   | 1.85   | 1.85   | 1.85   | 2.00   | 2.00   | 2.00   | 1.78            |
| 1920 <sup>1</sup> ..... | 2.00   | 2.05   | 2.05   | 2.00   | 2.00   | 1.75   | 1.60   | 1.45   | 1.30   | 1.20   | .95    | .90    | 1.60            |
| 1921.....               | .84    | .90    | .89    | .88    | .86    | .82    | .82    | .82    | .82    | .82    | .84    | .88    | .85             |
| 12-year average...      | .99    | 1.01   | 1.01   | 1.02   | 1.01   | 1.02   | 1.03   | 1.02   | 1.02   | 1.02   | 1.01   | 1.02   | 1.02            |

<sup>1</sup> Prices June to December, 1920, largely nominal.

Source: 1910-1920 data from National Association of Wool Manufacturers; 1921 data from Boston Commercial Bulletin.

WOOL—Continued.

TABLE 358.—Wool: Quarterly average price per pound on farms, by leading districts, 1910-1921.

| Year and month. | Ohio,<br>Pennsyl-<br>vania,<br>and<br>West<br>Virginia. | Michi-<br>gan,<br>Wiscon-<br>sin, and<br>New<br>York. | Ken-<br>tucky<br>and<br>Indiana. | Missouri,<br>Iowa,<br>and<br>Illinois. | Texas. | Calif-<br>ornia. | Mon-<br>tana,<br>Wyo-<br>ming,<br>Utah,<br>Idaho,<br>Oregon,<br>Nevada,<br>and<br>Arizona. | New<br>Mexico. | Florida,<br>Ala-<br>bama,<br>Missis-<br>sippl,<br>Louis-<br>iana,<br>and<br>Georgia. |
|-----------------|---|---|----------------------------------|--|--------|------------------|--|----------------|--|
| 1910-14:        |   |   |                                  |  |        |                  |  |                |  |
| January.....    | \$0.23  | \$0.21  | \$0.22                           | \$0.20                                 | \$0.16 | \$0.14           | \$0.17   | \$0.15         | \$0.21   |
| April.....      | .22   | .20   | .21                              | .19                                    | .16    | .14              | .16  | .15            | .19  |
| July.....       | .22   | .21   | .21                              | .19                                    | .16    | .15              | .16  | .14            | .19  |
| October.....    | .22   | .21   | .20                              | .19                                    | .15    | .13              | .16  | .14            | .18  |
| 1915:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .24   | .23   | .23                              | .20                                    | .15    | .16              | .21  | .17            | .17  |
| April.....      | .26   | .26   | .26                              | .24                                    | .18    | .20              | .22  | .18            | .18  |
| July.....       | .28   | .29   | .28                              | .26                                    | .19    | .20              | .22  | .19            | .21  |
| October.....    | .28   | .28   | .27                              | .26                                    | .18    | .17              | .21  | .19            | .20  |
| 1916:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .29   | .29   | .28                              | .26                                    | .20    | .18              | .24  | .21            | .20  |
| April.....      | .32   | .32   | .33                              | .30                                    | .23    | .24              | .27  | .22            | .25  |
| July.....       | .34   | .34   | .34                              | .31                                    | .24    | .24              | .27  | .24            | .25  |
| October.....    | .35   | .34   | .34                              | .31                                    | .25    | .21              | .28  | .24            | .26  |
| 1917:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .38   | .37   | .35                              | .33                                    | .26    | .31              | .35  | .27            | .25  |
| April.....      | .48   | .43   | .48                              | .45                                    | .35    | .45              | .44  | .37            | .32  |
| July.....       | .64   | .61   | .59                              | .57                                    | .44    | .52              | .53  | .46            | .44  |
| October.....    | .66   | .64   | .62                              | .58                                    | .47    | .51              | .56  | .48            | .46  |
| 1918:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .69   | .65   | .62                              | .59                                    | .50    | .53              | .57  | .47            | .45  |
| April.....      | .69   | .66   | .66                              | .61                                    | .51    | .49              | .55  | .54            | .49  |
| July.....       | .67   | .65   | .65                              | .61                                    | .52    | .50              | .55  | .49            | .53  |
| October.....    | .67   | .65   | .64                              | .60                                    | .51    | .50              | .54  | .44            | .54  |
| 1919:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .62   | .58   | .62                              | .56                                    | .45    | .42              | .51  | .35            | .50  |
| April.....      | .58   | .52   | .53                              | .49                                    | .42    | .43              | .48  | .42            | .44  |
| July.....       | .63   | .53   | .55                              | .53                                    | .46    | .47              | .49  | .46            | .45  |
| October.....    | .63   | .57   | .55                              | .51                                    | .44    | .42              | .48  | .43            | .44  |
| 1920:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .63   | .58   | .54                              | .52                                    | .46    | .45              | .50  | .45            | .48  |
| April.....      | .58   | .50   | .48                              | .44                                    | .45    | .44              | .44  | .44            | .41  |
| July.....       | .38   | .30   | .34                              | .28                                    | .30    | .28              | .28  | .26            | .25  |
| October.....    | .28   | .26   | .27                              | .22                                    | .24    | .23              | .26  | .22            | .19  |
| 1921:           |   |   |                                  |  |        |                  |  |                |  |
| January.....    | .27   | .23   | .22                              | .18                                    | .20    | .13              | .19  | .15            | .17  |
| April.....      | .22   | .19   | .17                              | .17                                    | .15    | .10              | .16  | .14            | .16  |
| July.....       | .19   | .18   | .16                              | .15                                    | .14    | .12              | .16  | .12            | .13  |
| October.....    | .20   | .18   | .17                              | .15                                    | .14    | .13              | .16  | .14            | .14  |

## WOOL—Continued.

TABLE 359.—Wool: International trade, calendar years 1909-1920.

"Wool" in this table includes: Washed, unwashed, scoured, and pulled wool; slipe, sheep's wool on skins (total weight of wool and skins taken); and all other animal fibers included in United States classification of wool. The following items have been considered as not within this classification: Corded, combed, and dyed wool; flocks, goatskins with hair on, mill waste, nolls, and tops. See "General note," Table 291.

| Country.                                    | Average, 1909-1913.      |                          | 1918                     |                          | 1919                     |                          | 1920                     |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|   | Imports.                 | Exports.                 | Imports.                 | Exports.                 | Imports.                 | Exports.                 | Imports.                 | Exports.                 |
| <b>PRINCIPAL EXPORT-<br/>ING COUNTRIES.</b> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> | <i>1,000<br/>pounds.</i> |
| Algeria.....                                | 2,445                    | 19,871                   | 19                       | 10,269                   | 2,639                    | 16,882                   | 2,392                    | 13,978                   |
| Argentina.....                              | 214                      | 328,204                  | 36                       | 256,613                  | 54                       | 339,208                  | .....                    | 215,472                  |
| Australia.....                              | 324                      | 676,679                  | 397                      | 607,585                  | 43                       | 680,769                  | .....                    | .....                    |
| British India.....                          | 23,721                   | 56,496                   | 29,495                   | 41,501                   | 27,344                   | 36,104                   | 22,766                   | 28,956                   |
| British South Africa.....                   | 7                        | 164,651                  | 97                       | 135,296                  | 889                      | 202,039                  | 183                      | 191,248                  |
| Chile.....                                  | 1,247                    | 28,223                   | 206                      | 25,204                   | 128                      | 27,500                   | 675                      | 30,392                   |
| China.....                                  | .....                    | 42,634                   | .....                    | 49,195                   | .....                    | 56,705                   | .....                    | 20,147                   |
| New Zealand.....                            | 168                      | 194,801                  | 6                        | 108,725                  | 5                        | 274,247                  | 37                       | 162,327                  |
| Persia.....                                 | <sup>1</sup> 2,753       | 10,023                   | 946                      | 1,342                    | 431                      | 1,558                    | .....                    | .....                    |
| Peru.....                                   | <sup>1</sup> 3           | 9,333                    | 1                        | 14,914                   | 24                       | 11,329                   | .....                    | .....                    |
| Spain.....                                  | 2,446                    | 28,505                   | 24,406                   | 8,442                    | 6,739                    | 19,095                   | 4,488                    | 14,846                   |
| Uruguay.....                                | .....                    | 139,178                  | .....                    | 75,141                   | .....                    | 141,330                  | .....                    | 66,393                   |
| <b>PRINCIPAL IMPORT-<br/>ING COUNTRIES.</b> | .....                    | .....                    | .....                    | .....                    | .....                    | .....                    | .....                    | .....                    |
| Austria-Hungary.....                        | 63,942                   | 9,622                    | .....                    | .....                    | .....                    | <sup>2</sup> 2,605       | .....                    | .....                    |
| Belgium.....                                | 300,307                  | 196,440                  | .....                    | .....                    | 102,764                  | 29,703                   | 243,122                  | 154,325                  |
| Canada.....                                 | 7,794                    | 1,323                    | 19,396                   | 3,117                    | 8,035                    | 10,100                   | 12,263                   | 6,289                    |
| France.....                                 | 601,628                  | 54,973                   | 90,185                   | 863                      | 347,690                  | 8,478                    | 362,124                  | 33,696                   |
| Germany.....                                | 431,988                  | 42,817                   | .....                    | .....                    | .....                    | .....                    | 122,779                  | 1,230                    |
| Japan.....                                  | 10,223                   | .....                    | 49,590                   | .....                    | 56,552                   | .....                    | 75,355                   | .....                    |
| Netherlands.....                            | 31,991                   | 26,362                   | 274                      | .....                    | 16,303                   | 3,783                    | 14,256                   | 5,702                    |
| Russia.....                                 | 106,184                  | 32,406                   | .....                    | .....                    | .....                    | .....                    | .....                    | .....                    |
| Sweden.....                                 | 7,267                    | 149                      | 754                      | <sup>(3)</sup> .....     | 15,371                   | 53                       | 11,036                   | .....                    |
| Switzerland.....                            | 11,211                   | 338                      | 7,959                    | 9                        | 10,249                   | 151                      | 10,317                   | 234                      |
| United Kingdom.....                         | 550,931                  | 42,027                   | 444,687                  | 2,347                    | 985,510                  | 18,708                   | 720,457                  | 22,536                   |
| United States.....                          | 203,268                  | 446                      | 453,727                  | 407                      | 445,893                  | 2,840                    | 259,618                  | 8,845                    |
| Other countries.....                        | 48,668                   | 55,754                   | 84,418                   | 6,403                    | 85,131                   | 15,952                   | 88,772                   | 9,044                    |
| <b>Total.....</b>                           | <b>2,458,820</b>         | <b>2,190,905</b>         | <b>1,206,599</b>         | <b>1,347,373</b>         | <b>2,111,844</b>         | <b>1,896,549</b>         | <b>1,953,250</b>         | <b>983,660</b>           |

<sup>1</sup> Three-year average.<sup>2</sup> Austria only.<sup>3</sup> Less than 500.<sup>4</sup> One-year average.

## SWINE.

TABLE 360.—Swine: Number and value on farms in the United States, January 1, 1870-1922.

NOTE.—Figures in *italics* are census returns; figures in *roman* are estimates of the Department of Agriculture. Estimates of numbers are obtained by applying estimated percentages of increase or decrease to the published numbers of the preceding year, except that a revised base is used for applying percentage estimates whenever new census data are available. It should also be observed that the census of 1910, giving numbers as of Apr. 15, is not strictly comparable with former censuses, which related to numbers June 1.

[In thousands—i. e., 000 omitted.]

| Year.              | Number.       | Farm<br>value,<br>Jan. 1. | Year.     | Number. | Farm<br>value,<br>Jan. 1. |
|--------------------|---------------|---------------------------|-----------|---------|---------------------------|
| 1870, June 1.....  | <i>25,135</i> | \$140,532                 | 1915..... | 64,618  | \$637,479                 |
| 1880, June 1.....  | <i>17,632</i> | 211,036                   | 1916..... | 67,766  | 569,573                   |
| 1890, June 1.....  | <i>57,410</i> | 281,686                   | 1917..... | 67,508  | 792,898                   |
| 1900, June 1.....  | <i>62,363</i> | 346,014                   | 1918..... | 70,978  | 1,387,261                 |
| 1910, Apr. 15..... | <i>59,186</i> | 533,309                   | 1919..... | 74,584  | 1,642,508                 |
| 1911.....          | 65,629        | 615,170                   | 1920..... | 59,344  | 1,131,674                 |
| 1912.....          | 65,410        | 523,328                   | 1921..... | 56,087  | 727,380                   |
| 1913.....          | 61,178        | 603,109                   | 1922..... | 56,896  | 573,405                   |
| 1914.....          | 53,633        | 612,951                   |           |         |                           |

## SWINE—Continued.

TABLE 361.—Swine: Farm price per head January 1, 1867–1922.

| Year.     | Price,<br>Jan. 1. | Year.     | Price,<br>Jan. 1. | Year.     | Price,<br>Jan. 1. | Year.     | Price,<br>Jan. 1. |
|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|
| 1867..... | \$4.08            | 1881..... | \$4.70            | 1895..... | \$4.97            | 1909..... | \$6.55            |
| 1868..... | 3.29              | 1882..... | 5.97              | 1896..... | 4.35              | 1910..... | 9.17              |
| 1869..... | 4.65              | 1883..... | 6.75              | 1897..... | 4.10              | 1911..... | 9.37              |
| 1870..... | 5.59              | 1884..... | 5.87              | 1898..... | 4.39              | 1912..... | 8.00              |
| 1871..... | 5.61              | 1885..... | 5.02              | 1899..... | 4.40              | 1913..... | 9.86              |
| 1872..... | 4.01              | 1886..... | 4.26              | 1900..... | 5.50              | 1914..... | 10.40             |
| 1873..... | 3.07              | 1887..... | 4.48              | 1901..... | 6.20              | 1915..... | 9.87              |
| 1874..... | 3.98              | 1888..... | 4.98              | 1902..... | 7.03              | 1916..... | 8.40              |
| 1875..... | 4.80              | 1889..... | 5.79              | 1903..... | 7.78              | 1917..... | 11.75             |
| 1876..... | 6.00              | 1890..... | 4.91              | 1904..... | 6.15              | 1918..... | 19.54             |
| 1877..... | 5.66              | 1891..... | 4.15              | 1905..... | 5.99              | 1919..... | 22.02             |
| 1878..... | 4.85              | 1892..... | 4.60              | 1906..... | 6.18              | 1920..... | 19.07             |
| 1879..... | 3.18              | 1893..... | 6.41              | 1907..... | 7.62              | 1921..... | 12.97             |
| 1880..... | 4.43              | 1894..... | 5.98              | 1908..... | 6.05              | 1922..... | 10.06             |

TABLE 362.—Swine: Number and value on farms January 1, 1920–1922, by States.

| State.              | Number (thousands)<br>Jan. 1— |        |        | Average price per head<br>Jan. 1— |         |         | Farm value (thousands of<br>dollars) Jan. 1— |         |         |
|---------------------|-------------------------------|--------|--------|-----------------------------------|---------|---------|--|---------|---------|
|                     | 1920                          | 1921   | 1922   | 1920                              | 1921    | 1922    | 1920   | 1921    | 1922    |
| Maine.....          | 91                            | 73     | 69     | \$24.50                           | \$21.00 | \$14.70 | \$2,230                                      | \$1,533 | \$1,014 |
| New Hampshire.....  | 42                            | 33     | 30     | 24.00                             | 20.00   | 15.00   | 1,008  | 660     | 450     |
| Vermont.....        | 73                            | 63     | 58     | 22.50                             | 14.80   | 12.40   | 1,642  | 932     | 719     |
| Massachusetts.....  | 104                           | 83     | 76     | 27.00                             | 20.50   | 16.30   | 2,808  | 1,702   | 1,239   |
| Rhode Island.....   | 13                            | 12     | 12     | 30.00                             | 21.00   | 17.50   | 390  | 252     | 210     |
| Connecticut.....    | 61                            | 55     | 47     | 27.50                             | 20.00   | 17.00   | 1,678  | 1,100   | 799     |
| New York.....       | 601                           | 559    | 520    | 22.50                             | 17.50   | 14.50   | 13,522                                       | 9,782   | 7,540   |
| New Jersey.....     | 139                           | 126    | 132    | 25.20                             | 20.00   | 17.00   | 3,503  | 2,520   | 2,244   |
| Pennsylvania.....   | 1,191                         | 1,143  | 1,143  | 23.70                             | 17.50   | 14.50   | 28,227                                       | 20,002  | 16,574  |
| Delaware.....       | 39                            | 37     | 41     | 19.00                             | 16.00   | 10.00   | 741  | 592     | 410     |
| Maryland.....       | 306                           | 291    | 285    | 18.00                             | 13.00   | 11.50   | 5,514  | 3,783   | 3,278   |
| Virginia.....       | 941                           | 847    | 805    | 15.00                             | 11.50   | 9.60    | 14,115                                       | 9,740   | 7,728   |
| West Virginia.....  | 305                           | 293    | 293    | 18.00                             | 14.00   | 10.80   | 5,490  | 4,102   | 3,164   |
| North Carolina..... | 1,271                         | 1,246  | 1,258  | 20.00                             | 15.70   | 12.00   | 25,420                                       | 19,562  | 15,096  |
| South Carolina..... | 845                           | 853    | 938    | 21.50                             | 13.50   | 9.20    | 18,168                                       | 11,516  | 8,630   |
| Georgia.....        | 2,071                         | 2,030  | 2,131  | 16.90                             | 11.50   | 8.60    | 35,000                                       | 23,345  | 18,327  |
| Florida.....        | 755                           | 740    | 725    | 13.00                             | 10.00   | 7.00    | 9,815  | 7,400   | 5,075   |
| Ohio.....           | 3,084                         | 2,906  | 2,862  | 19.20                             | 13.30   | 10.90   | 59,213                                       | 37,320  | 31,196  |
| Indiana.....        | 3,757                         | 3,532  | 3,567  | 19.00                             | 13.00   | 11.00   | 71,383                                       | 45,916  | 39,237  |
| Illinois.....       | 4,639                         | 4,129  | 4,046  | 20.50                             | 13.70   | 10.50   | 95,100                                       | 56,567  | 42,483  |
| Michigan.....       | 1,106                         | 1,084  | 1,051  | 22.00                             | 14.30   | 11.30   | 24,332                                       | 15,501  | 11,676  |
| Wisconsin.....      | 1,596                         | 1,676  | 1,659  | 23.50                             | 14.50   | 10.50   | 37,506                                       | 24,302  | 17,420  |
| Minnesota.....      | 2,981                         | 2,262  | 2,330  | 24.00                             | 15.30   | 11.20   | 57,144                                       | 34,609  | 20,086  |
| Iowa.....           | 7,864                         | 7,471  | 7,546  | 21.80                             | 14.50   | 11.00   | 171,435                                      | 108,330 | 83,006  |
| Missouri.....       | 3,839                         | 3,656  | 3,693  | 16.50                             | 11.00   | 8.50    | 64,168                                       | 40,216  | 31,390  |
| North Dakota.....   | 458                           | 431    | 435    | 21.00                             | 14.00   | 11.00   | 9,618  | 6,034   | 4,785   |
| South Dakota.....   | 1,954                         | 1,769  | 1,900  | 21.50                             | 13.50   | 10.00   | 42,011                                       | 28,746  | 19,000  |
| Nebraska.....       | 3,436                         | 3,605  | 3,680  | 20.90                             | 13.50   | 10.00   | 71,812                                       | 47,318  | 36,800  |
| Kansas.....         | 1,733                         | 1,837  | 2,113  | 17.50                             | 12.00   | 9.50    | 30,328                                       | 22,044  | 20,074  |
| Kentucky.....       | 1,604                         | 1,278  | 1,214  | 13.00                             | 9.90    | 7.50    | 19,552                                       | 12,652  | 9,105   |
| Tennessee.....      | 1,832                         | 1,594  | 1,546  | 15.00                             | 9.50    | 8.00    | 27,480                                       | 15,143  | 12,368  |
| Alabama.....        | 1,497                         | 1,347  | 1,307  | 12.80                             | 10.00   | 8.60    | 19,162                                       | 13,470  | 11,240  |
| Mississippi.....    | 1,373                         | 1,195  | 1,219  | 14.50                             | 9.50    | 8.00    | 19,908                                       | 11,852  | 9,752   |
| Louisiana.....      | 851                           | 749    | 756    | 14.30                             | 11.70   | 8.60    | 12,169                                       | 8,763   | 6,502   |
| Texas.....          | 2,226                         | 2,426  | 2,475  | 19.50                             | 11.80   | 8.50    | 43,407                                       | 28,627  | 21,038  |
| Oklahoma.....       | 1,304                         | 1,213  | 1,334  | 15.10                             | 10.30   | 8.50    | 19,690                                       | 12,494  | 11,339  |
| Arkansas.....       | 1,373                         | 1,228  | 1,255  | 12.50                             | 8.80    | 7.10    | 17,225                                       | 11,158  | 8,910   |
| Montana.....        | 167                           | 160    | 180    | 20.00                             | 16.50   | 13.10   | 3,340  | 2,640   | 2,358   |
| Wyoming.....        | 72                            | 68     | 73     | 18.40                             | 14.00   | 12.00   | 1,325  | 952     | 876     |
| Colorado.....       | 450                           | 414    | 455    | 18.00                             | 12.30   | 9.90    | 8,100  | 5,092   | 4,303   |
| New Mexico.....     | 88                            | 90     | 94     | 21.80                             | 15.00   | 9.00    | 1,918  | 1,350   | 846     |
| Arizona.....        | 50                            | 48     | 53     | 18.00                             | 16.00   | 12.00   | 900  | 768     | 636     |
| Utah.....           | 99                            | 90     | 90     | 15.00                             | 13.00   | 10.00   | 1,485  | 1,170   | 900     |
| Nevada.....         | 27                            | 25     | 25     | 14.00                             | 11.00   | 10.00   | 378  | 275     | 250     |
| Idaho.....          | 240                           | 206    | 196    | 17.80                             | 12.50   | 11.00   | 4,272  | 2,675   | 2,156   |
| Washington.....     | 265                           | 226    | 212    | 23.30                             | 15.00   | 12.50   | 6,174  | 3,540   | 2,680   |
| Oregon.....         | 267                           | 240    | 233    | 19.50                             | 12.80   | 10.70   | 5,206  | 3,072   | 2,493   |
| California.....     | 909                           | 818    | 834    | 18.00                             | 14.50   | 11.70   | 16,362                                       | 11,661  | 9,758   |
| United States.....  | 59,344                        | 56,007 | 56,906 | 19.07                             | 12.97   | 10.06   | 1,131,674                                    | 727,380 | 573,405 |



## SWINE—Continued.

TABLE 363.—Hogs: Farm price per 100 pounds, 1910–1921.

| Year.     | Jan.   | Feb.   | Mar.   | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1910..... | \$7.76 | \$7.87 | \$8.93 | \$9.26 | \$8.59 | \$8.45 | \$8.15 | \$7.78 | \$8.27 | \$8.08 | \$7.61 | \$7.18 |
| 1911..... | 7.44   | 7.04   | 6.75   | 6.17   | 5.72   | 5.68   | 5.92   | 6.54   | 6.63   | 6.09   | 5.86   | 5.72   |
| 1912..... | 8.74   | 8.79   | 8.94   | 6.78   | 6.79   | 6.65   | 6.64   | 7.11   | 7.47   | 7.70   | 7.05   | 6.89   |
| 1913..... | 6.77   | 7.17   | 7.62   | 7.94   | 7.45   | 7.61   | 7.81   | 7.79   | 7.68   | 7.60   | 7.33   | 7.16   |
| 1914..... | 7.45   | 7.75   | 7.80   | 7.80   | 7.60   | 7.43   | 7.72   | 8.11   | 8.11   | 7.43   | 7.00   | 6.67   |
| 1915..... | 6.57   | 6.34   | 6.33   | 6.48   | 6.77   | 6.80   | 6.84   | 6.61   | 6.79   | 7.18   | 6.35   | 6.02   |
| 1916..... | 6.32   | 7.07   | 7.85   | 8.21   | 8.37   | 8.21   | 8.40   | 8.61   | 9.22   | 8.67   | 8.74   | 8.70   |
| 1917..... | 9.16   | 10.33  | 12.32  | 13.61  | 13.72  | 13.50  | 13.35  | 14.24  | 15.69  | 16.15  | 15.31  | 15.73  |
| 1918..... | 15.26  | 15.03  | 15.58  | 15.76  | 15.84  | 15.37  | 15.58  | 16.89  | 17.50  | 16.50  | 15.92  | 15.82  |
| 1919..... | 15.69  | 15.53  | 16.13  | 17.39  | 18.00  | 17.80  | 19.22  | 19.30  | 15.81  | 13.88  | 13.36  | 12.66  |
| 1920..... | 13.36  | 13.62  | 13.59  | 13.73  | 13.44  | 13.18  | 13.65  | 13.59  | 13.98  | 13.57  | 11.64  | 8.90   |
| 1921..... | 8.72   | 8.58   | 9.13   | 7.96   | 7.62   | 7.22   | 8.09   | 8.73   | 7.61   | 7.31   | 6.66   | 6.52   |

TABLE 364.—Hogs: Monthly and yearly average price per 100 pounds, Chicago, 1910 to 1921.<sup>1</sup>

| Year.           | Jan.   | Feb.   | Mar.    | Apr.   | May.   | June.  | July.  | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   | Weighted average. |
|-----------------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
| 1910.....       | \$8.55 | \$9.05 | \$10.55 | \$9.90 | \$9.55 | \$9.45 | \$8.75 | \$8.35 | \$8.90 | \$8.50 | \$7.60 | \$7.65 | \$8.90            |
| 1911.....       | 7.95   | 7.40   | 6.85    | 6.25   | 6.00   | 6.25   | 6.70   | 7.30   | 6.90   | 6.45   | 6.30   | 6.40   | 6.70              |
| 1912.....       | 6.25   | 6.20   | 7.10    | 7.80   | 7.65   | 7.50   | 7.65   | 8.25   | 8.45   | 8.75   | 7.75   | 7.40   | 7.55              |
| 1913.....       | 7.45   | 8.15   | 8.90    | 9.05   | 8.55   | 8.65   | 9.05   | 8.35   | 8.30   | 8.20   | 7.75   | 7.70   | 8.35              |
| 1914.....       | 8.30   | 8.80   | 8.70    | 8.65   | 8.45   | 8.20   | 8.70   | 9.00   | 8.85   | 7.65   | 7.50   | 7.10   | 8.30              |
| 1915.....       | 6.90   | 6.80   | 6.75    | 7.30   | 7.90   | 7.60   | 7.75   | 8.90   | 7.25   | 7.90   | 6.65   | 6.40   | 7.10              |
| 1916.....       | 7.20   | 8.20   | 9.65    | 9.75   | 9.85   | 9.70   | 9.80   | 10.30  | 10.70  | 9.80   | 9.60   | 9.95   | 9.60              |
| 1917.....       | 10.90  | 12.45  | 14.80   | 15.75  | 15.90  | 15.50  | 15.20  | 16.90  | 18.20  | 17.15  | 17.40  | 16.55  | 15.10             |
| 1918.....       | 16.30  | 16.65  | 17.10   | 17.45  | 17.45  | 16.60  | 17.75  | 19.00  | 19.65  | 17.70  | 17.70  | 17.55  | 17.45             |
| 1919.....       | 17.60  | 17.65  | 19.10   | 20.40  | 20.60  | 20.40  | 21.85  | 20.00  | 17.45  | 14.35  | 14.20  | 13.00  | 17.85             |
| 1920.....       | 14.97  | 14.55  | 14.94   | 14.79  | 14.28  | 14.68  | 14.84  | 14.74  | 15.88  | 14.17  | 11.53  | 9.55   | 13.91             |
| 1921.....       | 9.41   | 9.42   | 10.00   | 8.50   | 8.35   | 8.19   | 9.69   | 9.26   | 7.61   | 7.72   | 7.01   | 6.92   | 8.51              |
| 12-year average | 10.15  | 10.43  | 11.20   | 11.30  | 11.19  | 11.06  | 11.48  | 11.53  | 11.51  | 10.70  | 10.11  | 9.76   | 10.78             |

<sup>1</sup> Prior to 1920 from Chicago Drovers' Journal Yearbook.

TABLE 365.—Hogs: Monthly average and top price per 100 pounds, 1921.

## CHICAGO.

| Month.         | Butcher, bacon, and shipper hogs.              |   |  |  | Packing sows.           |                        | Pigs, 130 pounds down, medium to choice. | Stock pigs, 130 pounds down, common to choice. | Bulk of sales. | Top.               |
|----------------|--|---|--|--|-------------------------|------------------------|--|--|----------------|--------------------|
|                | Heavy weight, 251 pounds up, medium to choice. | Medium weight, 201 to 250 pounds, medium to choice. | Light weight, 151 to 200 pounds, common to choice. | Light weight, 130 to 150 pounds, common to choice. | Smooth (250 pounds up). | Rough (200 pounds up). |  |  |                |                    |
| 1921.          |  |   |  |  |                         |                        |  |  |                |                    |
| January.....   | \$9.36   | \$9.54  | \$9.72   | \$9.75   | \$8.78                  | \$8.37                 | \$9.66                                   | .....  | \$9.47         | \$10.35            |
| February.....  | 9.20   | 9.55  | 9.90   | 9.94   | 8.45                    | 7.91                   | 9.52                                     | .....  | 9.42           | 10.75              |
| March.....     | 9.64   | 10.14   | 10.65  | 10.53  | 8.75                    | 8.17                   | 10.31                                    | .....  | 10.01          | 11.75              |
| April.....     | 8.94   | 8.69  | 8.96   | 8.96   | 7.46                    | 6.92                   | 8.06                                     | .....  | 8.54           | 10.25              |
| May.....       | 8.29   | 8.49  | 8.56   | 8.46   | 7.63                    | 7.17                   | 8.06                                     | .....  | 8.40           | 9.05               |
| June.....      | 8.23   | 8.35  | 8.39   | 8.33   | 7.80                    | 7.43                   | 8.06                                     | .....  | 8.24           | 9.25               |
| July.....      | 9.96   | 10.33   | 10.47  | 10.34  | 9.04                    | 8.57                   | 10.04                                    | .....  | 9.80           | 11.75              |
| August.....    | 9.47   | 10.07   | 10.25  | 9.95   | 8.32                    | 7.86                   | 9.35                                     | .....  | 9.23           | 11.85              |
| September..... | 8.03   | 8.46  | 8.39   | 8.05   | 6.87                    | 6.45                   | 7.64                                     | .....  | 7.59           | 9.65               |
| October.....   | 8.04   | 8.26  | 8.17   | 8.05   | 7.04                    | 6.57                   | 7.95                                     | .....  | 7.73           | 9.00               |
| November.....  | 7.08   | 7.12  | 7.30   | 7.30   | 6.56                    | 6.23                   | 7.53                                     | .....  | 7.03           | 8.25               |
| December.....  | 6.90   | 7.05  | 7.25   | 7.43   | 6.14                    | 5.68                   | 7.43                                     | .....  | 7.02           | 8.25               |
| Average.....   | 8.54   | 8.84  | 8.99   | 8.92   | 7.74                    | 7.28                   | 8.68                                     | .....  | 8.54           | <sup>1</sup> 11.85 |

<sup>1</sup> Top for year.

## SWINE—Continued.

TABLE 365.—Hogs: Monthly average and top price per 100 pounds, 1921—Continued.

KANSAS CITY.

| Month.         | Butcher, bacon, and shipper hogs.              |   |  |  | Packing sows.           |                        | Pigs, 130 pounds down, medium to choice. | Stock pigs, 130 pounds down, common to choice. | Bulk of sales. | Top.               |
|----------------|--|---|--|--|-------------------------|------------------------|--|--|----------------|--------------------|
|                | Heavy weight, 251 pounds up, medium to choice. | Medium weight, 201 to 250 pounds, medium to choice. | Light weight, 151 to 200 pounds, common to choice. | Light weight, 130 to 150 pounds, common to choice. | Smooth (250 pounds up). | Rough (200 pounds up). |  |  |                |                    |
| 1921.          |  |   |  |  |                         |                        |  |  |                |                    |
| January.....   | \$9.21   | \$9.29  | \$9.18   | \$9.16   | \$8.45                  | \$8.10                 | \$9.37                                   | \$8.99   | \$9.26         | \$9.00             |
| February.....  | 8.48   | 9.05  | 9.10   | 9.12   | 7.51                    | 7.09                   | 9.60                                     | 9.25   | 9.07           | 10.05              |
| March.....     | 9.23   | 9.72  | 9.84   | 9.86   | 8.03                    | 7.50                   | 10.78                                    | 10.14  | 9.77           | 11.00              |
| April.....     | 7.57   | 7.91  | 8.24   | 8.20   | 6.52                    | 5.95                   | .....                                    | 8.60   | 8.06           | 9.85               |
| May.....       | 7.71   | 7.94  | 8.10   | 7.97   | 6.73                    | 6.05                   | .....                                    | 8.03   | 8.01           | 8.55               |
| June.....      | 7.74   | 7.91  | 7.91   | 7.82   | 6.87                    | 6.16                   | .....                                    | 7.80   | 7.91           | 8.80               |
| July.....      | 9.62   | 9.81  | 9.74   | 9.61   | 8.75                    | 8.21                   | .....                                    | 8.82   | 9.86           | 11.30              |
| August.....    | 8.97   | 9.29  | 9.85   | 9.20   | 7.61                    | 7.00                   | .....                                    | 8.67   | 9.23           | 11.25              |
| September..... | 7.54   | 7.93  | 7.75   | 7.53   | 6.29                    | 5.51                   | .....                                    | 7.54   | 7.79           | 9.50               |
| October.....   | 7.55   | 7.74  | 7.52   | 7.41   | 6.64                    | 5.91                   | .....                                    | 7.50   | 7.62           | 8.45               |
| November.....  | 6.67   | 6.77  | 6.80   | 6.88   | 6.00                    | 5.43                   | .....                                    | 7.04   | 6.53           | 7.60               |
| December.....  | 6.66   | 6.84  | 6.92   | 6.95   | 5.69                    | 5.28                   | .....                                    | 6.71   | 6.84           | 7.85               |
| Average.....   | 8.08   | 8.35  | 8.37   | 8.31   | 7.09                    | 6.52                   | .....                                    | 8.26   | 8.35           | <sup>1</sup> 11.30 |

## OMAHA.

|                |        |        |        |        |        |        |       |        |        |                    |
|----------------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------------------|
| 1921.          |        |        |        |        |        |        |       |        |        |                    |
| January.....   | \$9.17 | \$9.30 | \$9.31 | .....  | \$8.86 | \$8.55 | ..... | \$8.77 | \$9.13 | \$9.90             |
| February.....  | 8.54   | 9.00   | 9.22   | .....  | 8.06   | 7.41   | ..... | 8.90   | 8.81   | 9.70               |
| March.....     | 9.36   | 9.71   | 9.86   | .....  | 8.73   | 8.17   | ..... | 9.48   | 9.43   | 10.75              |
| April.....     | 7.73   | 8.17   | 8.37   | .....  | 7.04   | 6.42   | ..... | 8.50   | 7.89   | 9.65               |
| May.....       | 7.74   | 8.04   | 8.14   | .....  | 7.25   | 6.62   | ..... | 7.87   | 7.84   | 8.65               |
| June.....      | 7.66   | 7.88   | 7.94   | .....  | 7.24   | 6.62   | ..... | 7.76   | 7.70   | 8.85               |
| July.....      | 9.30   | 9.53   | 9.59   | .....  | 8.71   | 8.28   | ..... | 8.36   | 9.19   | 11.00              |
| August.....    | 8.84   | 9.31   | 9.48   | .....  | 8.04   | 7.49   | ..... | 8.58   | 8.50   | 11.10              |
| September..... | 7.45   | 7.77   | 7.94   | .....  | 6.61   | 6.11   | ..... | 7.54   | 6.97   | 9.35               |
| October.....   | 7.36   | 7.59   | 7.72   | \$7.26 | 6.57   | 6.10   | ..... | 7.59   | 7.02   | 8.50               |
| November.....  | 6.62   | 6.73   | 6.75   | 6.59   | 6.02   | 5.64   | ..... | 6.98   | 6.45   | 7.75               |
| December.....  | 6.43   | 6.59   | 6.65   | 6.61   | 5.60   | 5.20   | ..... | 6.67   | 6.50   | 7.25               |
| Average.....   | 8.02   | 8.30   | 8.41   | .....  | 7.39   | 6.88   | ..... | 8.08   | 7.96   | <sup>1</sup> 11.10 |

## EAST ST. LOUIS.

|                |        |        |        |        |        |        |        |                   |        |                    |
|----------------|--------|--------|--------|--------|--------|--------|--------|-------------------|--------|--------------------|
| 1921.          |        |        |        |        |        |        |        |                   |        |                    |
| January.....   | \$9.34 | \$9.68 | \$9.84 | \$9.88 | \$8.03 | \$7.62 | \$9.08 | \$8.98            | \$9.71 | \$10.50            |
| February.....  | 9.16   | 9.65   | 9.98   | 10.00  | 7.88   | 7.57   | 9.62   | 9.56              | 9.98   | 10.85              |
| March.....     | 9.72   | 10.39  | 10.76  | 10.85  | 8.22   | 7.77   | 10.18  | 9.43              | 10.41  | 11.75              |
| April.....     | 8.22   | 8.59   | 8.84   | 8.86   | 6.72   | 6.30   | 8.67   | 8.19              | 8.72   | 10.70              |
| May.....       | 8.19   | 8.45   | 8.56   | 8.54   | 6.86   | 6.45   | 8.28   | 7.73              | 8.55   | 9.30               |
| June.....      | 8.01   | 8.25   | 8.31   | 8.28   | 7.05   | 6.56   | 8.01   | 7.71              | 8.84   | 9.00               |
| July.....      | 10.11  | 10.42  | 10.56  | 10.49  | 8.28   | 7.81   | 9.58   | 8.82              | 10.49  | 12.00              |
| August.....    | 9.59   | 10.14  | 10.32  | 10.09  | 7.84   | 7.38   | 9.23   | 8.44              | 10.14  | 11.80              |
| September..... | 8.02   | 8.59   | 8.55   | 8.40   | 6.37   | 5.92   | 7.82   | 7.18              | 8.44   | 9.70               |
| October.....   | 7.71   | 8.24   | 8.25   | 8.28   | 6.51   | 5.96   | 8.17   | 7.84              | 8.23   | 8.95               |
| November.....  | 7.00   | 7.19   | 7.31   | 7.43   | 6.04   | 5.63   | 7.67   | .....             | 7.28   | 8.25               |
| December.....  | 6.98   | 7.23   | 7.40   | 7.46   | 5.90   | 5.48   | 7.08   | .....             | 7.33   | 8.40               |
| Average.....   | 8.50   | 8.90   | 9.06   | 9.05   | 7.14   | 6.70   | 8.67   | <sup>2</sup> 8.29 | 8.94   | <sup>1</sup> 12.00 |

<sup>1</sup> Top for year.<sup>2</sup> 10 months' average.

## SWINE—Continued.

TABLE 366.—Hogs: Yearly receipts at principal markets, and at all markets, 1900 to 1921.

[In thousands—i. e. 000 omitted.]

| Year.     | Receipts at principal and other markets. <sup>1</sup> |              |        |           |                 |             |         |             |             |        | Total all mar-<br>kets. <sup>2</sup> |
|-----------|---|--------------|--------|-----------|-----------------|-------------|---------|-------------|-------------|--------|--------------------------------------|
|           | Chicago.  | Kansas City. | Omaha. | St. Paul. | East St. Louis. | Fort Worth. | Denver. | Sioux City. | St. Joseph. | Total. |                                      |
| 1900..... | 8,109   | 8,094        | 2,201  | 500       | 1,792           | (3)         | 116     | 833         | 1,679       | 18,324 | .....                                |
| 1901..... | 8,290   | 8,716        | 2,414  | 617       | 1,924           | (3)         | 109     | 900         | 2,106       | 20,135 | .....                                |
| 1902..... | 7,895   | 2,279        | 2,247  | 668       | 1,330           | 79          | 87      | 1,008       | 1,698       | 17,291 | .....                                |
| 1903..... | 7,320   | 1,969        | 2,281  | 760       | 1,568           | 151         | 147     | 1,008       | 1,701       | 16,861 | .....                                |
| 1904..... | 7,239   | 2,227        | 2,300  | 882       | 1,956           | 281         | 162     | 1,113       | 1,057       | 17,810 | .....                                |
| 1905..... | 7,726   | 2,508        | 2,294  | 855       | 2,026           | 463         | 191     | 1,299       | 1,900       | 19,262 | .....                                |
| 1906..... | 7,275   | 2,676        | 2,394  | 861       | 1,923           | 551         | 193     | 1,158       | 1,908       | 18,989 | .....                                |
| 1907..... | 7,201   | 2,924        | 2,254  | 867       | 2,065           | 488         | 241     | 1,289       | 1,923       | 19,252 | .....                                |
| 1908..... | 8,181   | 8,715        | 2,425  | 1,133     | 2,560           | 703         | 280     | 1,381       | 2,349       | 22,077 | .....                                |
| 1909..... | 6,619   | 8,098        | 2,135  | 725       | 2,473           | 868         | 242     | 1,077       | 1,694       | 18,926 | .....                                |
| 1910..... | 5,587   | 2,086        | 1,894  | 836       | 2,054           | 541         | 187     | 1,044       | 1,353       | 15,582 | .....                                |
| 1911..... | 7,108   | 8,168        | 2,367  | 911       | 2,108           | 556         | 220     | 1,349       | 1,922       | 20,704 | .....                                |
| 1912..... | 7,181   | 2,528        | 2,886  | 964       | 2,530           | 388         | 222     | 1,698       | 1,970       | 20,382 | .....                                |
| 1913..... | 7,571   | 2,568        | 2,643  | 1,287     | 2,584           | 404         | 247     | 1,538       | 1,869       | 20,570 | .....                                |
| 1914..... | 6,618   | 2,265        | 2,259  | 1,590     | 2,559           | 515         | 256     | 1,257       | 1,725       | 19,044 | .....                                |
| 1915..... | 7,082   | 2,531        | 2,643  | 2,155     | 2,592           | 464         | 344     | 1,761       | 1,098       | 21,840 | 14,378                               |
| 1916..... | 9,188   | 2,979        | 2,517  | 2,675     | 3,057           | 968         | 467     | 2,131       | 2,199       | 26,781 | 16,484                               |
| 1917..... | 7,109   | 2,277        | 2,797  | 1,028     | 2,706           | 1,062       | 352     | 2,149       | 1,920       | 22,360 | 15,682                               |
| 1918..... | 8,614   | 3,328        | 3,430  | 2,061     | 3,256           | 762         | 384     | 2,421       | 2,351       | 26,607 | 18,266                               |
| 1919..... | 8,672   | 3,141        | 3,179  | 2,190     | 3,651           | 588         | 368     | 2,322       | 2,120       | 26,237 | 18,232                               |
| 1920..... | 7,526   | 2,466        | 2,708  | 2,247     | 3,399           | 413         | 341     | 2,173       | 1,914       | 23,157 | 18,934                               |
| 1921..... | 8,148   | 2,205        | 2,665  | 2,209     | 3,330           | 382         | 334     | 1,739       | 1,785       | 22,797 | 18,304                               |

<sup>1</sup> Prior to 1915, receipts compiled from yearbook of stockyard companies.<sup>2</sup> Figures not obtainable prior to 1915.<sup>3</sup> Not in operation.TABLE 367.—Hogs: Monthly and yearly receipts at Chicago, Kansas City, Omaha, and East St. Louis, combined, 1910 to 1921.<sup>1</sup>

[In thousands—i. e., 000 omitted.]

| Year.                | Jan.  | Feb.  | Mar.  | Apr.  | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Total. |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1910.....            | 1,179 | 1,128 | 934   | 788   | 1,057 | 1,138 | 892   | 892   | 687   | 708   | 1,020 | 1,131 | 11,614 |
| 1911.....            | 1,270 | 1,302 | 1,516 | 1,304 | 1,521 | 1,487 | 1,200 | 979   | 970   | 1,231 | 1,533 | 1,451 | 15,701 |
| 1912.....            | 1,908 | 1,612 | 1,350 | 1,242 | 1,381 | 1,218 | 1,090 | 846   | 703   | 1,093 | 1,207 | 1,389 | 15,096 |
| 1913.....            | 1,640 | 1,315 | 1,170 | 1,154 | 1,267 | 1,328 | 1,129 | 1,095 | 1,081 | 1,153 | 1,288 | 1,655 | 15,265 |
| 1914.....            | 1,479 | 1,328 | 1,182 | 1,001 | 1,055 | 1,167 | 927   | 830   | 826   | 1,093 | 1,158 | 1,640 | 13,696 |
| 1915.....            | 1,669 | 1,640 | 1,511 | 1,080 | 1,234 | 1,222 | 1,037 | 921   | 803   | 848   | 1,387 | 2,009 | 15,418 |
| 1916.....            | 2,313 | 1,950 | 1,518 | 1,154 | 1,356 | 1,283 | 1,090 | 1,221 | 954   | 1,407 | 1,993 | 2,091 | 18,341 |
| 1917.....            | 2,199 | 1,697 | 1,367 | 1,205 | 1,320 | 1,125 | 1,063 | 757   | 545   | 902   | 1,280 | 1,401 | 14,947 |
| 1918.....            | 1,657 | 1,888 | 1,963 | 1,697 | 1,454 | 1,246 | 1,356 | 1,047 | 932   | 1,376 | 1,794 | 2,207 | 18,627 |
| 1919.....            | 2,418 | 1,978 | 1,631 | 1,571 | 1,644 | 1,680 | 1,814 | 829   | 913   | 1,129 | 1,485 | 2,049 | 18,041 |
| 1920.....            | 2,136 | 1,357 | 1,030 | 1,059 | 1,086 | 1,433 | 1,131 | 988   | 795   | 894   | 1,381 | 1,611 | 10,101 |
| 1921.....            | 1,910 | 1,708 | 1,340 | 1,275 | 1,340 | 1,494 | 1,122 | 1,092 | 940   | 1,092 | 1,459 | 1,558 | 10,348 |
| 12-year average..... | 1,816 | 1,575 | 1,426 | 1,211 | 1,361 | 1,319 | 1,114 | 958   | 851   | 1,082 | 1,416 | 1,692 | 15,821 |

<sup>1</sup> Prior to 1915 from yearbooks of stockyard companies.

SWINE—Continued.

TABLE 368.—Hogs: Yearly receipts, local slaughter, and stocker and feeder shipments at public stockyards, 1919–1921.

[In thousands—i. e., 000 omitted.]

| Stockyards.          | Receipts. |        |        | Local slaughter. |                  |                  | Stocker and feeder shipments. |                  |                  |
|----------------------|-----------|--------|--------|------------------|------------------|------------------|-------------------------------|------------------|------------------|
|                      | 1919      | 1920   | 1921   | 1919             | 1920             | 1921             | 1919                          | 1920             | 1921             |
| Albany, N. Y.        | 2         | 2      | 1      | 2                | 2                | ( <sup>1</sup> ) |                               |                  |                  |
| Amarillo, Tex.       | 2         | 7      | 8      |                  |                  |                  | ( <sup>1</sup> )              | 1                |                  |
| Atlanta, Ga.         | 83        | 68     | 91     | 37               | 42               | 61               | 4                             | 8                | 5                |
| Augusta, Ga.         | 9         | 7      | 10     | 5                | 5                | 7                | 1                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Baltimore, Md.       | 963       | 1,154  | 1,238  | 661              | 874              | 1,013            |                               |                  |                  |
| Billings, Mont.      | 11        | 1      | 1      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 3                             | ( <sup>1</sup> ) |                  |
| Birmingham, Ala.     | 23        | 24     | 27     | 24               | 24               | 27               |                               |                  |                  |
| Boston, Mass.        | 22        | 14     | 8      |                  |                  |                  |                               |                  |                  |
| Buffalo, N. Y.       | 1,352     | 1,494  | 1,603  | 730              | 631              | 670              |                               | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Chattanooga, Tenn.   | 14        | 11     | 17     | 13               | 11               | 17               | 1                             |                  |                  |
| Cheyenne, Wyo.       | 3         | 10     | 45     |                  |                  |                  |                               |                  |                  |
| Chicago, Ill.        | 8,672     | 7,526  | 8,148  | 7,572            | 5,870            | 5,977            | 14                            | 2                | 2                |
| Cincinnati, Ohio.    | 1,674     | 1,478  | 1,435  | 823              | 789              | 898              | 1                             | 3                | 4                |
| Cleveland, Ohio.     | 1,084     | 1,012  | 960    | 729              | 610              | 688              |                               |                  |                  |
| Columbia, S. C.      | 6         | 7      | 4      | 6                | 7                | 4                |                               |                  |                  |
| Columbus, Ohio.      | 52        | 69     | 61     | 4                | 14               | 14               | 1                             | 1                | 1                |
| Dallas, Tex.         | 45        | 56     | 51     | 45               | 56               | 52               |                               |                  |                  |
| Dayton, Ohio.        | 109       | 129    | 131    | 61               | 76               | 83               |                               |                  |                  |
| Denver, Colo.        | 368       | 341    | 334    | 336              | 310              | 311              | 32                            | 31               | 22               |
| Detroit, Mich.       | 389       | 444    | 359    | 336              | 360              | 269              | 8                             | 5                | 5                |
| Dublin, Ga.          | 3         | 3      | 3      |                  | ( <sup>1</sup> ) |                  | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| East St. Louis, Ill. | 3,650     | 3,399  | 3,330  | 2,231            | 1,678            | 1,289            | 98                            | 47               | 44               |
| El Paso, Tex.        | 17        | 15     | 29     | 9                | 14               | 14               | 4                             | 3                | 8                |
| Emeryville, Calif.   | 10        | 16     | 21     | 10               | 16               | 21               |                               |                  |                  |
| Erie, Pa.            | 43        | 61     |        | 16               | 15               |                  |                               |                  |                  |
| Evansville, Ind.     | 255       | 243    | 219    | 31               | 80               | 73               | 10                            | 4                | 4                |
| Fort Worth, Tex.     | 588       | 413    | 382    | 464              | 322              | 277              | 55                            | 24               | 52               |
| Fostoria, Ohio.      | 79        | 99     | 107    | 10               | 10               | 11               | 3                             | 1                | 2                |
| Indianapolis, Ind.   | 2,936     | 2,897  | 2,695  | 1,434            | 1,359            | 1,377            | 41                            | 17               | 21               |
| Jacksonville, Fla.   | 78        | 100    | 99     | 66               | 72               | 47               | 1                             | 1                |                  |
| Jersey City, N. J.   | 468       | 629    | 509    | 468              | 629              | 509              |                               |                  |                  |
| Kansas City, Mo.     | 3,140     | 2,496  | 2,205  | 2,600            | 1,838            | 1,713            | 244                           | 200              | 94               |
| Knoxville, Tenn.     | 37        | 42     | 15     | 3                | 2                | 9                | 1                             | ( <sup>1</sup> ) | 1                |
| Lafayette, Ind.      | 199       | 204    | 166    | 37               | 40               | 44               | 3                             | 5                | 7                |
| Lancaster, Pa.       | 63        | 185    | 44     | 13               | 11               | 17               |                               |                  |                  |
| Logansport, Ind.     | 16        | 23     | 26     | 1                | 2                | 1                | ( <sup>1</sup> )              | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Louisville, Ky.      | 750       | 428    | 382    | 173              | 156              | 180              | 28                            | 11               | 8                |
| Marion, Ohio.        | 155       | 217    | 95     | 10               | 13               | 16               | 4                             | 2                | 2                |
| Memphis, Tenn.       | 11        | 30     | 9      | 2                | 1                | 4                | ( <sup>1</sup> )              | 4                | 1                |
| Milwaukee, Wis.      | 535       | 554    | 489    | 534              | 509              | 482              | ( <sup>1</sup> )              |                  |                  |
| Montgomery, Ala.     | 171       | 109    | 97     | 3                | 5                | 2                | 22                            | 15               | 9                |
| Moultrie, Ga.        |           |        | 42     |                  |                  | 26               |                               |                  | 3                |
| Nashville, Tenn.     | 727       | 615    | 436    | 67               | 82               | 113              | 28                            | 18               | 2                |
| Nebraska City, Nebr. | 298       | 311    | 324    | 271              | 258              | 287              | ( <sup>1</sup> )              |                  | ( <sup>1</sup> ) |
| New Brighton, Minn.  | 3         | 7      | 1      |                  |                  |                  | 2                             | 4                | 1                |
| New Orleans, La.     | 63        | 63     | 50     | 43               | 45               | 40               | 3                             | 3                | 1                |
| New York, N. Y.      | 677       | 755    | 902    | 677              | 755              | 902              |                               |                  |                  |
| Ogden, Utah.         | 104       | 78     | 176    | 67               | 47               | 47               | 13                            | 11               | 2                |
| Oklahoma, Okla.      | 470       | 341    | 371    | 360              | 288              | 331              | 43                            | 21               | 13               |
| Omaha, Nebr.         | 3,179     | 2,708  | 2,665  | 2,531            | 1,998            | 1,971            | 8                             | 7                | 4                |
| Orangeburg, S. C.    | 2         |        |        | 2                |                  |                  |                               |                  |                  |
| Pasco, Wash.         | 7         | 2      | 2      | ( <sup>1</sup> ) | ( <sup>1</sup> ) |                  |                               |                  |                  |
| Peoria, Ill.         | 390       | 354    | 424    | 153              | 135              | 164              | ( <sup>1</sup> )              | 3                | 8                |
| Philadelphia, Pa.    | 345       | 481    | 485    | 329              | 457              | 457              |                               |                  |                  |
| Pittsburgh, Pa.      | 1,779     | 2,439  | 2,277  | 279              | 413              | 505              |                               |                  |                  |
| Portland, Oreg.      | 205       | 175    | 150    | 103              | 91               | 112              | 15                            | 17               | 11               |
| Pueblo, Colo.        | 24        | 14     | 5      |                  |                  | 1                |                               | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Richmond, Va.        | 156       | 212    | 170    | 154              | 210              | 169              | 1                             |                  |                  |
| St. Joseph, Mo.      | 2,126     | 1,914  | 1,785  | 1,919            | 1,584            | 1,517            | 27                            | 23               | 9                |
| St. Paul, Minn.      | 2,190     | 2,247  | 2,209  | 1,317            | 1,905            | 1,668            | 103                           | 161              | 104              |
| Salt Lake City, Utah | 53        | 34     | 56     | 39               | 25               | 36               | 4                             | 3                | 2                |
| San Antonio, Tex.    | 25        | 39     | 70     | 7                | 16               | 33               | 2                             | 3                | 4                |
| Seattle, Wash.       | 126       | 95     | 134    | 124              | 92               | 132              | 2                             | 3                | 1                |
| Sioux City, Iowa.    | 2,321     | 2,173  | 1,739  | 1,411            | 1,290            | 1,047            | 33                            | 28               | 19               |
| Sioux Falls, S. Dak. | 174       | 247    | 452    | ( <sup>1</sup> ) | 5                | 57               | 2                             | 2                | 3                |
| Spokane, Wash.       | 60        | 47     | 33     | 42               | 32               | 21               | 15                            | 12               | 6                |
| Tacoma, Wash.        | 30        | 35     | 59     | 31               | 34               | 58               | ( <sup>1</sup> )              |                  |                  |
| Toledo, Ohio.        | 232       | 264    | 148    | 53               | 86               | 24               | 2                             | 2                | 1                |
| Washington, D. C.    | 72        | 102    | 113    | 71               | 101              | 112              |                               |                  |                  |
| Wichita, Kans.       | 494       | 382    | 369    | 469              | 350              | 348              | 20                            | 23               | 13               |
| Total.               | 44,469    | 42,121 | 41,101 | 30,018           | 26,761           | 26,335           | 902                           | 728              | 499              |

<sup>1</sup> Less than 500.

## SWINE—Continued.

TABLE 369.—Hogs: Monthly and yearly receipts, slaughter, and stocker and feeder shipments at public stockyards, 1921.

[In thousands—i. e., 000 omitted.]

| Stockyards.                       | Jan.             | Feb.             | Mar.             | Apr.             | May.             | June.            | July.            | Aug.             | Sept.            | Oct.             | Nov.             | Dec.             | Total.           |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Chicago, Ill.:                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 994              | 816              | 608              | 573              | 583              | 705              | 568              | 582              | 493              | 583              | 768              | 875              | 8,148            |
| Local slaughter.....              | 753              | 614              | 419              | 465              | 492              | 564              | 428              | 423              | 390              | 442              | 560              | 427              | 5,977            |
| Stocker and feeder shipments..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 2                |
| Kansas City, Mo.:                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 228              | 244              | 191              | 187              | 256              | 226              | 125              | 147              | 126              | 142              | 178              | 155              | 2,205            |
| Local slaughter.....              | 175              | 183              | 134              | 163              | 216              | 197              | 96               | 108              | 97               | 100              | 132              | 112              | 1,713            |
| Stocker and feeder shipments..... | 8                | 11               | 17               | 9                | 7                | 6                | 3                | 5                | 8                | 8                | 6                | 6                | 94               |
| Omaha, Nebr.:                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 289              | 327              | 280              | 241              | 238              | 287              | 245              | 162              | 128              | 126              | 151              | 191              | 2,665            |
| Local slaughter.....              | 230              | 244              | 198              | 183              | 186              | 232              | 177              | 122              | 99               | 94               | 118              | 88               | 1,971            |
| Stocker and feeder shipments..... | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | .....            | 4                |
| East St. Louis, Ill.:             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 405              | 321              | 267              | 274              | 263              | 276              | 184              | 201              | 199              | 241              | 362              | 337              | 3,330            |
| Local slaughter.....              | 186              | 154              | 92               | 94               | 117              | 117              | 64               | 77               | 77               | 80               | 134              | 97               | 1,239            |
| Stocker and feeder shipments..... | 3                | 3                | 7                | 8                | 5                | 3                | 2                | 3                | 3                | 1                | 1                | 5                | 44               |
| St. Paul, Minn.:                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 263              | 236              | 208              | 157              | 176              | 159              | 113              | 107              | 104              | 202              | 267              | 217              | 2,209            |
| Local slaughter.....              | 211              | 187              | 161              | 126              | 136              | 128              | 94               | 87               | 88               | 160              | 173              | 117              | 1,668            |
| Stocker and feeder shipments..... | 11               | 13               | 15               | 10               | 9                | 6                | 2                | 3                | 7                | 12               | 9                | 7                | 104              |
| Fort Worth, Tex.:                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 31               | 37               | 67               | 34               | 30               | 21               | 26               | 33               | 29               | 27               | 20               | 27               | 382              |
| Local slaughter.....              | 20               | 26               | 46               | 23               | 24               | 20               | 21               | 28               | 17               | 18               | 14               | 20               | 277              |
| Stocker and feeder shipments..... | 4                | 6                | 11               | 8                | 3                | 1                | 1                | 2                | 3                | 6                | 2                | 5                | 52               |
| Sioux City, Iowa:                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 191              | 201              | 169              | 157              | 134              | 181              | 162              | 127              | 103              | 97               | 92               | 125              | 1,739            |
| Local slaughter.....              | 121              | 128              | 94               | 99               | 83               | 124              | 95               | 74               | 66               | 61               | 61               | 41               | 1,047            |
| Stocker and feeder shipments..... | 2                | 3                | 4                | 2                | 1                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                | 2                | 2                | 1                | 19               |
| Jersey City, N. J.:               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 65               | 64               | 41               | 41               | 30               | 27               | 25               | 37               | 33               | 59               | 40               | 47               | 509              |
| Local slaughter.....              | 65               | 64               | 41               | 41               | 30               | 27               | 25               | 37               | 33               | 59               | 40               | 47               | 509              |
| St. Joseph, Mo.:                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 174              | 178              | 115              | 116              | 140              | 188              | 148              | 126              | 98               | 114              | 173              | 220              | 1,785            |
| Local slaughter.....              | 136              | 148              | 91               | 104              | 121              | 173              | 131              | 106              | 78               | 96               | 152              | 181              | 1,517            |
| Stocker and feeder shipments..... | ( <sup>1</sup> ) | 1                | 2                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                | 1                | 1                | 1                | 9                |
| Indianapolis, Ind.:               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 392              | 230              | 162              | 208              | 221              | 259              | 186              | 176              | 214              | 231              | 223              | 193              | 2,695            |
| Local slaughter.....              | 165              | 99               | 74               | 102              | 106              | 140              | 100              | 105              | 98               | 110              | 143              | 140              | 1,377            |
| Stocker and feeder shipments..... | 1                | 1                | 1                | 2                | 2                | 5                | 1                | 1                | 3                | 2                | 1                | 1                | 21               |
| Buffalo, N. Y.:                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 204              | 139              | 121              | 127              | 131              | 113              | 91               | 102              | 123              | 164              | 141              | 147              | 1,603            |
| Local slaughter.....              | 100              | 30               | 50               | 56               | 57               | 51               | 46               | 43               | 56               | 59               | 63               | 59               | 670              |
| Stocker and feeder shipments..... | .....            | .....            | .....            | ( <sup>1</sup> ) | .....            | .....            | ( <sup>1</sup> ) | .....            | .....            | .....            | .....            | .....            | ( <sup>1</sup> ) |
| Pittsburgh, Pa.:                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 251              | 175              | 156              | 160              | 151              | 150              | 131              | 136              | 182              | 261              | 241              | 288              | 2,277            |
| Local slaughter.....              | 55               | 40               | 37               | 35               | 36               | 35               | 34               | 35               | 39               | 52               | 51               | 56               | 505              |
| Denver, Colo.:                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 36               | 39               | 35               | 27               | 37               | 36               | 25               | 20               | 14               | 20               | 23               | 22               | 334              |
| Local slaughter.....              | 32               | 36               | 34               | 25               | 35               | 34               | 27               | 19               | 13               | 17               | 22               | 17               | 311              |
| Stocker and feeder shipments..... | 5                | 2                | 2                | 1                | 1                | 1                | 1                | 1                | 1                | 2                | 1                | 4                | 22               |
| Cincinnati, Ohio:                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 162              | 111              | 96               | 112              | 123              | 134              | 98               | 93               | 113              | 120              | 142              | 141              | 1,435            |
| Local slaughter.....              | 89               | 74               | 64               | 66               | 78               | 88               | 61               | 53               | 66               | 71               | 98               | 95               | 898              |
| Stocker and feeder shipments..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 1                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | .....            | .....            | 4                |
| Oklahoma, Okla.:                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 25               | 30               | 59               | 46               | 48               | -32              | 21               | 26               | 28               | 16               | 18               | 22               | 371              |
| Local slaughter.....              | 21               | 25               | 60               | 41               | 44               | 29               | 19               | 23               | 25               | 12               | 14               | 18               | 331              |
| Stocker and feeder shipments..... | 1                | 1                | 2                | 1                | 1                | 1                | 1                | ( <sup>1</sup> ) | 1                | 1                | 3                | ( <sup>1</sup> ) | 13               |
| Cleveland, Ohio:                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Receipts.....                     | 98               | 72               | 69               | 75               | 77               | 100              | 63               | 60               | 84               | 84               | 89               | 89               | 960              |
| Local slaughter.....              | 77               | 55               | 49               | 50               | 56               | 83               | 46               | 40               | 57               | 50               | 62               | 63               | 688              |

<sup>1</sup> Less than 500.

SWINE—Continued.

TABLE 370.—Hogs: Monthly average weight, 1921, and 12-year average, at Chicago, Kansas City, Omaha, and East St. Louis.

| Market.                         | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------------------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|
| Chicago:                        |      |      |      |      |      |       |       |      |       |      |      |      |
| 1921.....                       | 234  | 234  | 241  | 242  | 239  | 241   | 250   | 259  | 262   | 243  | 225  | 226  |
| 12-year average, 1910-1921..... | 219  | 224  | 230  | 233  | 235  | 236   | 241   | 245  | 241   | 226  | 216  | 216  |
| Kansas City:                    |      |      |      |      |      |       |       |      |       |      |      |      |
| 1921.....                       | 236  | 236  | 233  | 229  | 224  | 211   | 223   | 225  | 216   | 222  | 216  | 223  |
| 12-year average, 1910-1921..... | 207  | 209  | 208  | 210  | 206  | 202   | 203   | 200  | 196   | 193  | 195  | 200  |
| Omaha:                          |      |      |      |      |      |       |       |      |       |      |      |      |
| 1921.....                       | 248  | 246  | 252  | 250  | 259  | 255   | 260   | 274  | 283   | 274  | 244  | 232  |
| 12-year average, 1910-1921..... | 232  | 233  | 239  | 243  | 245  | 245   | 249   | 255  | 265   | 262  | 248  | 235  |
| East St. Louis:                 |      |      |      |      |      |       |       |      |       |      |      |      |
| 1921.....                       | 211  | 210  | 200  | 198  | 198  | 201   | 204   | 206  | 196   | 196  | 205  | 207  |
| 12-year average, 1910-1921..... | 181  | 181  | 179  | 180  | 182  | 185   | 183   | 184  | 185   | 179  | 182  | 179  |

TABLE 371.—Hogs: Corn and hog ratios, based on average farm price per 100 pounds of live hogs, divided by average farm price of 1 bushel of corn, 1910 to 1921.

| Year.                | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Average. |
|----------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|----------|
| 1910.....            | 12.2 | 12.0 | 13.6 | 14.4 | 13.3 | 12.9  | 12.2  | 11.7 | 13.0  | 14.2 | 15.1 | 14.9 | 13.3     |
| 1911.....            | 15.3 | 14.4 | 13.7 | 12.1 | 10.7 | 9.8   | 9.4   | 9.9  | 9.9   | 9.3  | 9.3  | 9.2  | 11.1     |
| 1912.....            | 9.1  | 8.8  | 8.6  | 9.0  | 8.4  | 8.1   | 8.3   | 9.1  | 10.1  | 12.0 | 13.2 | 14.1 | 9.9      |
| 1913.....            | 13.6 | 13.9 | 14.4 | 14.4 | 12.7 | 12.3  | 12.1  | 11.1 | 10.2  | 10.4 | 10.5 | 10.3 | 12.2     |
| 1914.....            | 10.8 | 11.3 | 11.2 | 10.9 | 10.3 | 9.9   | 10.1  | 10.3 | 10.3  | 10.0 | 10.4 | 10.2 | 10.5     |
| 1915.....            | 9.5  | 8.6  | 8.4  | 8.5  | 8.7  | 8.7   | 8.5   | 9.2  | 10.8  | 10.6 | 10.6 | 10.1 | 9.2      |
| 1916.....            | 9.8  | 10.5 | 11.4 | 11.5 | 11.4 | 11.0  | 10.9  | 10.6 | 11.1  | 10.4 | 10.1 | 9.8  | 10.7     |
| 1917.....            | 9.9  | 10.5 | 11.5 | 10.3 | 8.8  | 8.3   | 7.4   | 7.7  | 9.0   | 10.1 | 11.2 | 12.0 | 9.7      |
| 1918.....            | 11.2 | 10.3 | 10.1 | 10.2 | 10.3 | 10.0  | 9.9   | 10.1 | 10.8  | 11.0 | 11.5 | 11.3 | 10.6     |
| 1919.....            | 11.1 | 11.3 | 11.2 | 11.1 | 10.8 | 10.2  | 10.5  | 10.2 | 9.3   | 9.7  | 9.2  | 9.2  | 10.3     |
| 1920.....            | 9.3  | 9.2  | 8.9  | 8.4  | 7.6  | 7.1   | 7.8   | 8.5  | 10.1  | 13.0 | 15.0 | 13.2 | 9.8      |
| 1921.....            | 13.5 | 13.5 | 14.3 | 13.0 | 12.5 | 11.6  | 13.1  | 14.8 | 14.0  | 15.9 | 16.0 | 15.2 | 14.0     |
| 12-year average..... | 11.3 | 11.2 | 11.4 | 11.2 | 10.5 | 10.0  | 10.0  | 10.2 | 10.6  | 11.4 | 11.8 | 11.6 | 10.9     |

TABLE 372.—Pork, fresh, chilled, and frozen: Yearly exports and imports, by principal countries.

[In thousands of pounds—i. e. 000 omitted.]

EXPORTS.

| Country.                  | 1910   | 1911   | 1912   | 1913   | 1914    | 1915   | 1916   | 1917   | 1918   | 1919   | 1920   |
|---------------------------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
| Exported by—              |        |        |        |        |         |        |        |        |        |        |        |
| Argentina.....            | 2      |        |        |        | 736     | 1,960  | 2,965  | 1,684  | 2,269  | 9,915  | (1)    |
| Australia.....            | 741    | 1,641  |        | 215    | 49      | 3      | 33     | 263    | 840    | 371    | (1)    |
| Belgium.....              | 3,266  | 3,936  | 2,332  | 1,927  |         |        |        |        |        |        | 10     |
| Brazil.....               |        |        |        |        |         |        |        |        |        |        | 3,395  |
| British South Africa..... |        | 15     | 48     | 14     | 19      | 42     | 55     |        | 55     | 1,352  | 250    |
| Canada.....               |        |        | 287    | 876    | 17,045  | 15,198 | 12,904 | 12,067 | 35,738 | 2,379  | 1,576  |
| Denmark.....              | 1,337  | 3,461  | 14,516 | 4,342  | 2,682   | 33,443 | 26,919 | 15,985 | 79     | 622    | (3)    |
| France.....               | 6,373  | 1,187  | 1,296  | 1,492  | 1,286   | 108    | 105    | 6,720  | 338    | 985    | 396    |
| Netherlands.....          | 62,112 | 64,465 | 55,424 | 79,111 | 106,901 | 97,887 | 34,694 | 6,475  | (1)    | 8,593  | 3,427  |
| New Zealand.....          | 1,229  | 1,222  | 123    | 232    | 165     | 713    | 838    | 1,655  |        |        | 2      |
| Russia.....               | 7,067  | 5,988  | 9,091  | 8,276  | 5,899   | 4,453  | 1,011  |        | (1)    | 69     | (1)    |
| Sweden.....               | 459    |        | 14,125 | 4,780  | 7,662   | 13,274 | 20,461 | 7,443  | 1      | 6      | (6)    |
| United States.....        | 927    | 2,232  | 2,608  | 3,183  | 1,251   | 24,280 | 55,112 | 49,376 | 11,633 | 26,777 | 38,805 |
| Uruguay.....              |        |        |        |        |         |        |        | 26     | 391    | (1)    | (1)    |

1 Not yet available.

2 Year beginning July 1.

3 Less than 500 pounds.

4 Unclassified.

5 Not separately stated.

## SWINE—Continued.

TABLE 372.—Pork, fresh, chilled, and frozen: Yearly exports and imports, by principal countries—Continued.

[In thousands of pounds—i. e., 000 omitted.]

## IMPORTS.

| Country.            | 1910   | 1911   | 1912   | 1913   | 1914   | 1915   | 1916   | 1917    | 1918   | 1919             | 1920             |
|---------------------|--------|--------|--------|--------|--------|--------|--------|---------|--------|------------------|------------------|
| <i>Imported by—</i> |        |        |        |        |        |        |        |         |        |                  |                  |
| Austria-Hungary     | 7      | 3,885  | 6,964  | 2,404  | -----  | -----  | -----  | -----   | -----  | -----            | -----            |
| Belgium             | 932    | 459    | 38     | 27     | -----  | -----  | -----  | -----   | -----  | 63               | 11,274           |
| Canada              | 251    | 645    | 496    | 380    | 64     | 9,063  | 57,533 | 101,223 | 1,564  | 44,937           | 11,977           |
| Cuba                | 143    | 107    | 88     | 123    | 186    | 216    | 107    | 158     | 516    | 564              | ( <sup>1</sup> ) |
| Denmark             | 134    | 1,263  | 1,830  | 1,794  | 4,684  | 714    | -----  | -----   | -----  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| France              | 54     | 15,187 | 10,794 | 3,208  | 2,189  | 91     | 2,184  | 9,848   | 10,222 | 18,889           | 6,803            |
| Germany             | 8,211  | 3,129  | 29,123 | 35,875 | -----  | -----  | -----  | -----   | -----  | -----            | 14,445           |
| Netherlands         | 42     | 49     | 2,321  | 101    | 47     | 60     | -----  | -----   | -----  | 10               | 159              |
| Sweden              | -----  | -----  | 1      | 4      | 2      | 11     | 43     | 902     | 12     | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Switzerland         | 3,926  | 14,606 | 22,172 | 12,608 | 7,545  | 55     | 4      | -----   | -----  | -----            | -----            |
| United Kingdom      | 53,750 | 50,728 | 35,027 | 55,358 | 96,455 | 30,182 | 32,847 | 18,015  | 11,150 | 15,263           | 56,245           |
| United States       | -----  | -----  | -----  | 269    | 18,952 | 3,498  | 955    | 2,580   | 1,722  | 2,779            | 1,541            |

<sup>1</sup> Not yet available.<sup>6</sup> Not separately stated.

## MEATS AND LARD.

TABLE 373.—Fresh and smoked meats: Monthly average wholesale price per 100 pounds, Chicago and New York, 1921.

## CHICAGO.

| Class of meat.          | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Average. |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| <b>Beef:</b>            |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Steer—                  |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Choice                  | \$20.90 | \$17.33 | \$18.96 | \$18.10 | \$17.25 | \$16.64 | \$16.56 | \$17.17 | \$17.13 | \$18.31 | \$18.34 | \$18.08 | \$17.89  |
| Good                    | 18.43   | 15.20   | 17.06   | 18.65   | 16.94   | 15.22   | 15.10   | 15.74   | 16.20   | 16.65   | 16.49   | 16.48   | 16.26    |
| Medium                  | 16.38   | 13.80   | 14.62   | 14.85   | 14.76   | 14.02   | 13.54   | 12.99   | 13.04   | 13.30   | 13.00   | 13.98   | 14.02    |
| Common                  | 18.43   | 11.83   | 12.55   | 13.00   | 13.43   | 12.02   | 11.55   | 10.51   | 9.39    | 9.76    | 9.50    | 10.75   | 11.48    |
| Cow—                    |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Good                    | 14.63   | 12.33   | 13.75   | 14.39   | 13.95   | 12.95   | 12.85   | 12.36   | 11.64   | 11.86   | 11.50   | 11.50   | 12.81    |
| Medium                  | 12.30   | 11.13   | 12.06   | 13.10   | 12.84   | 11.88   | 11.83   | 11.28   | 10.36   | 10.23   | 9.50    | 10.25   | 11.36    |
| Common                  | 11.30   | 10.13   | 10.82   | 11.30   | 10.95   | 10.04   | 10.00   | 9.45    | 8.31    | 8.28    | 7.50    | 8.25    | 9.69     |
| Bull—Common             | 10.75   | 9.69    | 10.37   | 9.80    | 10.48   | 8.81    | 9.32    | 8.61    | 8.05    | 7.73    | 7.00    | 7.26    | 8.99     |
| <b>Veal:</b>            |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Choice                  | 20.10   | 18.96   | 19.82   | 17.55   | 17.43   | 16.28   | 18.18   | 17.72   | 20.41   | 19.10   | 16.61   | 15.71   | 18.15    |
| Good                    | 18.35   | 17.90   | 18.45   | 15.85   | 15.78   | 15.28   | 16.60   | 15.52   | 18.60   | 16.58   | 15.19   | 13.71   | 16.48    |
| Medium                  | 16.60   | 15.90   | 16.40   | 14.10   | 13.83   | 13.26   | 14.60   | 12.70   | 15.43   | 13.35   | 13.23   | 12.71   | 14.34    |
| Common                  | 13.30   | 13.20   | 13.64   | 11.43   | 11.03   | 10.76   | 12.18   | 10.00   | 11.93   | 9.55    | 10.98   | 10.54   | 11.64    |
| <b>Lamb and Mutton:</b> |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Lamb—                   |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Choice                  | 24.20   | 19.24   | 21.92   | 21.25   | 23.95   | 23.60   | 25.68   | 23.02   | 19.70   | 17.85   | 19.16   | 23.80   | 21.95    |
| Good                    | 22.05   | 17.26   | 19.28   | 18.75   | 21.53   | 20.88   | 23.50   | 20.46   | 17.70   | 16.25   | 17.86   | 21.62   | 19.76    |
| Medium                  | 19.18   | 15.50   | 17.26   | 16.25   | 19.03   | 18.06   | 20.68   | 18.22   | 15.45   | 14.08   | 15.36   | 19.58   | 17.39    |
| Common                  | 15.78   | 13.18   | 14.68   | 13.75   | 15.78   | 14.32   | 17.28   | 15.50   | 11.93   | 11.28   | 12.06   | 17.08   | 14.38    |
| Yearling—               |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Good                    | 18.50   | 14.80   | 14.66   | 15.50   | 16.00   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | 115.89   |
| Medium                  | 16.50   | 13.40   | 13.50   | 13.50   | 14.00   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | 114.18   |
| Common                  | 14.50   | 11.63   | 11.50   | 11.50   | 12.00   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | 112.23   |
| Mutton—                 |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Good                    | 11.05   | 9.85    | 13.72   | 14.43   | 15.05   | 12.98   | 12.18   | 12.26   | 10.53   | 10.20   | 9.83    | 11.05   | 11.93    |
| Medium                  | 9.00    | 8.83    | 11.42   | 12.30   | 13.05   | 10.98   | 9.95    | 10.34   | 9.05    | 8.25    | 8.68    | 10.05   | 10.13    |
| Common                  | 7.50    | 7.45    | 9.44    | 9.80    | 10.55   | 8.46    | 7.45    | 7.84    | 6.90    | 6.40    | 5.82    | 7.42    | 7.93     |
| <b>Fresh pork cuts:</b> |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Loins—                  |         |         |         |         |         |         |         |         |         |         |         |         |          |
| 8-10 pounds             | 22.45   | 20.02   | 25.78   | 27.20   | 21.55   | 20.09   | 22.78   | 29.00   | 28.31   | 25.03   | 17.10   | 18.25   | 23.13    |
| 10-12 pounds            | 21.05   | 18.60   | 24.44   | 25.18   | 19.68   | 18.86   | 21.11   | 26.88   | 25.59   | 22.33   | 16.13   | 17.01   | 21.40    |
| 12-14 pounds            | 19.40   | 17.23   | 22.28   | 23.00   | 18.13   | 17.09   | 19.69   | 23.26   | 21.95   | 19.33   | 15.11   | 16.11   | 19.44    |
| 14-16 pounds            | 21.63   | 16.11   | 19.80   | 20.58   | 16.55   | 15.54   | 18.09   | 20.10   | 18.70   | 17.28   | 14.11   | 15.09   | 17.55    |
| 16 pounds over          | -----   | 14.88   | 17.50   | 17.53   | 14.45   | 15.41   | 16.66   | 16.66   | 15.46   | 14.55   | 13.08   | 14.19   | 15.52    |
| Shoulders               |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Skinned                 | 15.38   | 13.99   | 15.62   | 14.90   | 12.85   | 12.87   | 13.05   | 14.96   | 14.91   | 13.43   | 11.69   | 12.71   | 13.86    |
| Pieces                  |         |         |         |         |         |         |         |         |         |         |         |         |          |
| 4-6 pounds              | 14.20   | 13.70   | 14.14   | 12.85   | 11.45   | 12.66   | 14.23   | 13.91   | 12.18   | 11.01   | 11.01   | 11.56   | 12.75    |
| 6-8 pounds              | 13.20   | 12.70   | 13.14   | 11.35   | 9.50    | 11.95   | 13.53   | 12.94   | 11.33   | 10.31   | 9.90    | 10.76   | 11.72    |
| 8 pounds over           | 12.20   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | -----   | -----    |
| Butts, Boston style     | 17.90   | 15.61   | 18.12   | 17.28   | 14.13   | 14.39   | 15.15   | 18.52   | 18.58   | 16.08   | 13.42   | 14.88   | -----    |

<sup>1</sup> Five months average.<sup>2</sup> Fourteen pounds over prior to February, 1921.<sup>6</sup> Eleven months average.

MEATS AND LARD—Continued.

TABLE 373.—*Fresh and smoked meats: Monthly average wholesale price per 100 pounds, Chicago and New York, 1921—Continued.*

CHICAGO—Continued.

| Class of meat.                    | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Average. |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| Cured pork cuts:                  |         |         |         |         |         |         |         |         |         |         |         |         |          |
| Hams, smoked (14-16 average)..... | \$24.25 | \$25.63 | \$25.50 | \$25.38 | \$25.16 | \$25.60 | \$29.44 | \$29.50 | \$25.56 | \$22.19 | \$21.38 | \$21.22 | \$25.07  |
| Shoulders, picnics, smoked.....   | 17.85   | 17.88   | 16.73   | 15.94   | 15.35   | 16.53   | 17.91   | 17.45   | 14.25   | 13.63   | 15.95   | 16.66   | 16.30    |
| Bacon, breakfast.....             | 26.25   | 27.81   | 27.80   | 27.38   | 25.69   | 25.53   | 26.44   | 27.30   | 24.88   | 22.50   | 21.80   | 20.56   | 25.33    |
| Lard (tierces).....               | 16.03   | 14.91   | 14.48   | 13.07   | 11.88   | 12.03   | 13.94   | 13.65   | 13.51   | 12.16   | 11.62   | 11.25   | 13.21    |
| Lard compound (tierces).....      | 12.38   | 11.69   | 10.63   | 9.31    | 9.63    | 9.70    | 11.00   | 11.73   | 12.28   | 12.13   | 11.30   | 10.94   | 11.06    |

NEW YORK.

|                                   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Beef:                             |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Steer—                            |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Choice.....                       |         |         |         | \$18.60 | \$16.97 | \$16.84 | \$16.80 | \$18.33 | \$17.94 | \$18.46 | \$18.47 | \$18.85 | \$17.92 |
| Good.....                         | \$17.36 | \$14.45 | \$17.08 | 17.04   | 15.84   | 15.56   | 15.25   | 15.85   | 15.34   | 15.05   | 14.34   | 14.92   | 15.66   |
| Medium.....                       | 16.00   | 13.36   | 16.01   | 15.94   | 14.71   | 14.42   | 13.35   | 13.40   | 13.03   | 12.64   | 12.00   | 12.95   | 13.98   |
| Common.....                       |         | 12.71   | 15.00   | 14.81   | 13.16   | 12.17   | 11.03   | 10.35   | 10.62   | 9.92    | 9.70    | 11.32   | \$11.89 |
| Cow—                              |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Good.....                         | 14.36   |         | 14.40   | 14.63   | 13.39   | 12.84   | 12.75   | 12.42   | 11.25   | 10.50   | 9.52    | 11.38   | \$12.49 |
| Medium.....                       | 13.35   | 10.76   | 13.59   | 13.68   | 12.40   | 11.82   | 11.14   | 10.52   | 9.75    | 9.50    | 8.73    | 10.36   | 11.30   |
| Common.....                       | 12.48   |         | 12.51   |         |         | 10.48   | 9.82    | 9.04    | 8.47    | 8.56    | 8.11    | 8.78    | \$9.81  |
| Bull—                             |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Good.....                         |         |         | 12.89   | 11.36   |         | 11.94   |         |         |         |         |         |         |         |
| Medium.....                       | 13.18   | 10.22   | 11.02   | 9.95    | 11.42   | 10.28   |         |         |         |         |         |         | \$11.01 |
| Common.....                       | 11.89   | 9.44    | 10.23   | 9.56    | 10.59   | 8.87    | 10.17   | 8.74    | 8.40    | 8.21    | 6.87    | 9.17    | 9.24    |
| Veal:                             |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Choice.....                       | 27.25   | 22.12   | 21.58   |         |         | 18.48   | 18.58   | 20.06   | 24.50   | 21.80   | 18.23   | 21.66   | \$21.43 |
| Good.....                         | 23.63   | 19.85   | 19.74   | 17.75   | 16.30   | 16.34   | 15.95   | 16.88   | 20.85   | 19.18   | 16.40   | 17.98   | 18.40   |
| Medium.....                       | 20.63   | 14.73   | 17.24   | 15.38   | 14.58   | 15.17   | 13.88   | 14.12   | 16.95   | 16.32   | 14.11   | 16.25   | 15.78   |
| Common.....                       | 16.30   | 15.03   | 14.38   | 12.83   | 12.47   | 12.90   | 11.68   | 11.26   | 12.96   | 11.80   | 10.69   | 13.03   | 12.95   |
| Lamb and mutton:                  |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Lamb—                             |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Choice.....                       | 25.78   | 20.33   | 22.40   | 22.75   | 25.98   | 26.88   | 25.75   | 23.34   | 20.73   | 19.24   | 21.26   | 26.65   | 23.42   |
| Good.....                         | 24.53   | 18.58   | 20.68   | 20.68   | 24.23   | 24.55   | 23.53   | 21.26   | 19.00   | 17.90   | 19.70   | 23.98   | 21.64   |
| Medium.....                       | 22.33   | 16.72   | 18.48   | 18.88   | 22.05   | 21.88   | 20.94   | 19.12   | 16.75   | 16.05   | 17.31   | 22.85   | 19.45   |
| Common.....                       |         |         |         |         |         | 17.14   | 15.79   | 14.44   | 12.40   | 12.92   |         | 20.37   | \$15.51 |
| Mutton—                           |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Good.....                         | 13.40   | 10.97   | 12.82   | 15.26   | 15.55   | 12.84   | 15.40   | 12.28   | 12.01   | 11.25   | 10.33   | 13.30   | 12.95   |
| Medium.....                       | 12.03   | 9.85    | 11.40   | 13.38   | 14.28   | 10.12   | 12.36   | 10.56   | 10.50   | 10.00   | 9.17    | 11.50   | 11.25   |
| Common.....                       | 10.05   | 8.49    | 10.18   | 10.94   | 10.87   | 6.86    | 9.20    | 7.78    | 7.55    | 7.61    | 6.74    | 8.47    | 8.73    |
| Fresh pork cuts:                  |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Loins—                            |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 8-10 pounds.....                  | 25.73   | 21.65   | 24.32   | 27.58   | 22.98   | 22.09   | 23.69   | 27.98   | 26.21   | 27.70   | 19.23   | 19.63   | 24.32   |
| 10-12 pounds.....                 | 24.18   | 20.22   | 22.58   | 25.55   | 21.28   | 20.78   | 21.71   | 25.82   | 27.20   | 25.75   | 18.24   | 18.55   | 22.66   |
| 12-14 pounds.....                 | 22.96   | 19.06   | 21.16   | 24.08   | 19.90   | 19.18   | 20.30   | 23.12   | 23.92   | 23.40   | 17.38   | 17.60   | 21.01   |
| 14-16 pounds.....                 | \$20.75 | 18.00   | 19.68   | 21.68   | 18.35   | 18.02   | 18.70   | 20.04   | 19.94   | 20.10   | 16.88   | 16.59   | \$18.91 |
| 16 pounds over.....               |         | 16.90   | 18.24   | 19.48   | 17.13   | 16.53   | 17.40   | 17.38   | 16.92   | 17.42   | 15.62   | 15.49   | \$17.12 |
| Shoulders—                        |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Skinned.....                      | 16.33   | 15.00   | 15.77   | 15.84   | 13.66   | 13.40   | 13.35   | 15.96   | 15.05   | 14.99   | 13.41   | 14.02   | 14.73   |
| Picnics—                          |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 4-6 pounds.....                   | 14.20   | 13.84   | 14.26   | 13.88   | 11.86   | 11.82   | 11.90   | 13.38   | 11.86   | 12.25   | 11.60   | 11.99   | 12.73   |
| 6-8 pounds.....                   |         |         |         |         |         |         |         |         |         |         |         |         |         |
| 8 pounds over.....                |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Butts—                            |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Boneless.....                     | 23.38   | 19.30   |         | 23.55   |         | 19.84   |         |         |         |         |         |         |         |
| Boston style.....                 | 20.15   | 17.10   | 18.23   | 18.33   | 15.60   | 14.79   | 15.12   | 17.33   | 18.82   | 18.98   | 16.42   | 15.55   | 17.20   |
| Cured pork cuts:                  |         |         |         |         |         |         |         |         |         |         |         |         |         |
| Hams, smoked (10-12 average)..... | 24.63   | 28.00   | 27.60   | 27.68   | 25.50   | 25.00   | 28.50   | 31.86   | 26.50   | 23.00   | 22.00   | 22.38   | 26.10   |
| Shoulders, picnics, smoked.....   | 19.88   | 17.25   | 16.60   | 16.25   | 15.00   | 15.40   | 16.25   | 17.72   | 15.25   | 14.00   | 14.00   | 14.00   | 15.97   |
| Bacon, breakfast.....             | 29.13   | 30.25   | 30.00   | 30.00   | 29.50   | 28.05   | 28.00   | 29.56   | 27.00   | 24.00   | 24.00   | 24.00   | 27.79   |
| Lard (tierces).....               | 14.13   | 15.13   | 13.90   | 13.50   | 12.44   | 12.45   | 13.13   | 13.88   | 13.88   | 12.75   | 12.45   | 11.25   | 13.22   |
| Lard compound (tierces).....      | 11.50   | 11.75   | 10.65   | 9.50    | 8.75    | 8.95    | 9.88    | 11.20   | 11.72   | 12.25   | 11.95   | 10.75   | 10.74   |

\* Fourteen pounds over prior to February, 1921.

\* Eleven months average.

\* Nine months average.

\* Six months average.

\* Ten months average.



## MEATS AND LARD—Continued.

TABLE 374.—Cold-storage holdings of frozen and cured meats, 1917 to 1921:

[In thousands of pounds—i. e., 000 omitted.]

| Year.     | January 1. | February 1. | March 1.  | April 1.  | May 1.    | June 1.   |
|-----------|------------|-------------|-----------|-----------|-----------|-----------|
| 1917..... | 803,669    | 875,450     | 913,659   | 851,990   | 827,951   | 831,867   |
| 1918..... | 981,378    | 1,117,965   | 1,265,564 | 1,354,961 | 1,319,328 | 1,299,779 |
| 1919..... | 1,199,282  | 1,452,312   | 1,436,378 | 1,368,764 | 1,332,443 | 1,288,768 |
| 1920..... | 1,015,553  | 1,186,530   | 1,278,729 | 1,904,142 | 1,251,508 | 1,208,728 |
| 1921..... | 820,245    | 976,053     | 1,138,033 | 1,107,706 | 1,042,552 | 1,017,209 |

| Year.     | July 1.   | August 1. | September 1. | October 1. | November 1. | December 1. |
|-----------|-----------|-----------|--------------|------------|-------------|-------------|
| 1917..... | 878,598   | 893,472   | 778,119      | 632,802    | 587,245     | 709,043     |
| 1918..... | 1,149,377 | 1,186,501 | 1,035,861    | 1,005,326  | 882,230     | 938,066     |
| 1919..... | 1,254,457 | 1,171,381 | 1,061,274    | 984,259    | 880,719     | 865,101     |
| 1920..... | 1,194,464 | 1,115,082 | 977,225      | 783,777    | 670,295     | 655,636     |
| 1921..... | 989,402   | 899,406   | 776,981      | 607,455    | 490,648     | 504,659     |

TABLE 375.—Lard, pure: Monthly and yearly average price per 100 pounds, Chicago, 1910 to 1921.<sup>1</sup>

| Year.                | Jan.    | Feb.    | Mar.    | Apr.    | May.    | June.   | July.   | Aug.    | Sept.   | Oct.    | Nov.    | Dec.    | Average. |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1910.....            | \$12.43 | \$12.50 | \$14.08 | \$12.33 | \$12.95 | \$12.27 | \$11.85 | \$11.82 | \$12.44 | \$12.93 | \$10.82 | \$10.31 | \$12.23  |
| 1911.....            | 10.22   | 9.60    | 8.83    | 7.98    | 8.03    | 8.17    | 8.30    | 8.97    | 9.32    | 8.85    | 9.07    | 9.00    | 8.86     |
| 1912.....            | 9.24    | 8.90    | 9.37    | 10.06   | 10.77   | 10.87   | 10.57   | 10.73   | 11.08   | 11.47   | 11.15   | 10.46   | 10.39    |
| 1913.....            | 9.88    | 10.50   | 10.66   | 11.00   | 11.05   | 10.99   | 11.53   | 11.28   | 11.15   | 10.60   | 10.63   | 10.68   | 10.83    |
| 1914.....            | 10.89   | 10.67   | 10.52   | 10.23   | 9.95    | 10.03   | 10.08   | 9.69    | 9.68    | 10.22   | 10.89   | 10.05   | 10.24    |
| 1915.....            | 10.69   | 10.53   | 9.84    | 9.95    | 9.71    | 9.39    | 8.05    | 7.92    | 8.13    | 9.07    | 8.94    | 9.47    | 9.31     |
| 1916.....            | 10.22   | 9.99    | 10.79   | 11.77   | 12.80   | 12.87   | 13.12   | 13.44   | 14.47   | 15.34   | 16.91   | 16.66   | 13.21    |
| 1917.....            | 15.66   | 17.00   | 19.30   | 21.00   | 22.30   | 21.41   | 20.77   | 22.40   | 24.03   | 24.29   | 27.13   | 25.46   | 21.73    |
| 1918.....            | 24.39   | 26.05   | 26.07   | 25.44   | 24.53   | 24.50   | 26.09   | 26.78   | 26.98   | 26.66   | 26.69   | 25.31   | 25.79    |
| 1919.....            | 23.46   | 24.33   | 27.35   | 30.09   | 33.58   | 34.15   | 34.78   | 30.01   | 26.19   | 27.41   | 25.86   | 23.11   | 28.40    |
| 1920.....            | 23.52   | 23.14   | 22.93   | 22.71   | 22.75   | 22.98   | 21.71   | 21.16   | 22.58   | 23.28   | 22.07   | 18.15   | 22.25    |
| 1921.....            | 16.03   | 14.91   | 14.48   | 13.07   | 11.88   | 12.03   | 13.94   | 13.65   | 13.51   | 12.16   | 11.62   | 11.25   | 13.21    |
| 12-year average..... | 14.74   | 14.88   | 15.35   | 15.47   | 15.86   | 15.80   | 15.90   | 15.65   | 15.90   | 16.02   | 15.98   | 14.99   | 15.54    |

<sup>1</sup> Prior to February, 1920, from National Provisioner.

TABLE 376.—Cold-storage holdings of lard, 1916 to 1921.

[In thousands of pounds—i. e., 000 omitted.]

| Year.     | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1.  | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|
| 1916..... | 63,304  | 92,342  | 111,897 | 97,237  | 108,731 | 85,113  | 87,127  | 95,991  | 82,028   | 71,570  | 56,929  | 58,950  |
| 1917..... | 80,977  | 86,208  | 88,460  | 65,179  | 61,640  | 72,365  | 95,197  | 112,249 | 102,172  | 63,829  | 37,095  | 44,367  |
| 1918..... | 54,539  | 59,310  | 65,355  | 89,854  | 103,373 | 106,194 | 107,871 | 102,411 | 104,668  | 90,398  | 76,124  | 81,676  |
| 1919..... | 104,274 | 135,353 | 125,410 | 112,469 | 112,409 | 83,096  | 92,132  | 100,478 | 87,947   | 76,456  | 66,036  | 49,147  |
| 1920..... | 62,614  | 97,649  | 111,975 | 132,998 | 141,819 | 152,307 | 193,316 | 191,531 | 170,774  | 109,258 | 47,329  | 36,683  |
| 1921..... | 59,319  | 83,549  | 117,690 | 128,614 | 152,428 | 181,992 | 204,301 | 194,490 | 149,886  | 85,115  | 48,850  | 42,001  |

## LIVE-STOCK VALUES.

TABLE 377.—Aggregate live-stock value comparisons.

[Farm values Jan. 1, in millions of dollars; i. e., 000,000 omitted; States arranged according to 1923 rank in value of all animals.]

| State.              | Cattle, hogs, and sheep. |       |                     | Horses and mules. |       |                     | Total (cattle, hogs, sheep, horses, and mules). |       |                     | Rank in aggregate value. |       |
|---------------------|--------------------------|-------|---------------------|-------------------|-------|---------------------|---|-------|---------------------|--------------------------|-------|
|                     | 1921                     | 1922  | Average, 1916-1920. | 1921              | 1922  | Average, 1916-1920. | 1921  | 1922  | Average, 1916-1920. | 1921                     | 1922  |
| Iowa.....           | 356                      | 293   | 438                 | 120               | 99    | 162                 | 476   | 337   | 600                 | 1                        | 1     |
| Texas.....          | 293                      | 184   | 298                 | 169               | 131   | 186                 | 482   | 315   | 494                 | 2                        | 2     |
| Illinois.....       | 224                      | 147   | 261                 | 121               | 95    | 164                 | 345   | 242   | 415                 | 3                        | 3     |
| Wisconsin.....      | 205                      | 151   | 224                 | 72                | 61    | 82                  | 277   | 212   | 306                 | 4                        | 4     |
| Ohio.....           | 176                      | 124   | 201                 | 89                | 81    | 103                 | 265   | 205   | 304                 | 5                        | 5     |
| Minnesota.....      | 182                      | 128   | 191                 | 79                | 70    | 96                  | 261   | 198   | 287                 | 7                        | 6     |
| New York.....       | 153                      | 134   | 178                 | 69                | 62    | 83                  | 222   | 196   | 261                 | 10                       | 7     |
| Nebraska.....       | 188                      | 133   | 248                 | 75                | 60    | 105                 | 263   | 193   | 353                 | 6                        | 8     |
| Missouri.....       | 180                      | 120   | 214                 | 101               | 70    | 133                 | 281   | 190   | 347                 | 13                       | 9     |
| Kansas.....         | 148                      | 109   | 211                 | 93                | 67    | 136                 | 241   | 176   | 347                 | 8                        | 10    |
| Indiana.....        | 152                      | 104   | 164                 | 78                | 65    | 97                  | 230   | 169   | 261                 | 9                        | 11    |
| Pennsylvania.....   | 131                      | 98    | 130                 | 68                | 62    | 78                  | 199   | 160   | 208                 | 12                       | 12    |
| California.....     | 155                      | 119   | 182                 | 45                | 36    | 51                  | 200   | 155   | 203                 | 11                       | 13    |
| Michigan.....       | 116                      | 81    | 131                 | 59                | 56    | 76                  | 175   | 137   | 207                 | 14                       | 14    |
| South Dakota.....   | 120                      | 80    | 142                 | 50                | 39    | 71                  | 170   | 119   | 213                 | 15                       | 15    |
| Oklahoma.....       | 83                       | 58    | 108                 | 73                | 54    | 96                  | 156   | 112   | 204                 | 16                       | 16    |
| Tennessee.....      | 67                       | 40    | 66                  | 67                | 53    | 75                  | 134   | 93    | 141                 | 19                       | 17    |
| Kentucky.....       | 69                       | 43    | 78                  | 65                | 49    | 71                  | 134   | 92    | 149                 | 13                       | 18    |
| Colorado.....       | 85                       | 64    | 108                 | 29                | 25    | 38                  | 114   | 89    | 146                 | 21                       | 19    |
| Georgia.....        | 70                       | 41    | 72                  | 73                | 47    | 81                  | 143   | 88    | 153                 | 17                       | 20    |
| North Dakota.....   | 58                       | 42    | 68                  | 53                | 45    | 83                  | 111   | 87    | 151                 | 22                       | 21    |
| North Carolina..... | 54                       | 36    | 49                  | 61                | 51    | 62                  | 115   | 87    | 111                 | 20                       | 22    |
| Montana.....        | 65                       | 55    | 100                 | 34                | 28    | 44                  | 99  | 84    | 144                 | 26                       | 23    |
| Mississippi.....    | 55                       | 34    | 60                  | 55                | 42    | 63                  | 110   | 76    | 123                 | 23                       | 24    |
| Virginia.....       | 59                       | 39    | 61                  | 43                | 35    | 46                  | 102   | 74    | 107                 | 24                       | 25    |
| Arkansas.....       | 47                       | 30    | 53                  | 53                | 40    | 59                  | 100   | 70    | 112                 | 25                       | 26    |
| Alabama.....        | 46                       | 31    | 58                  | 46                | 38    | 58                  | 92  | 69    | 116                 | 27                       | 27    |
| Oregon.....         | 58                       | 43    | 68                  | 24                | 22    | 28                  | 82  | 65    | 96                  | 29                       | 28    |
| Idaho.....          | 49                       | 41    | 66                  | 20                | 15    | 24                  | 69  | 59    | 90                  | 32                       | 29    |
| Louisiana.....      | 38                       | 25    | 46                  | 41                | 34    | 40                  | 79  | 59    | 86                  | 30                       | 30    |
| South Carolina..... | 26                       | 21    | 32                  | 52                | 35    | 50                  | 88  | 56    | 82                  | 28                       | 31    |
| Washington.....     | 40                       | 33    | 39                  | 26                | 22    | 32                  | 66  | 55    | 71                  | 34                       | 32    |
| New Mexico.....     | 62                       | 41    | 81                  | 12                | 10    | 16                  | 74  | 51    | 97                  | 31                       | 33    |
| Wyoming.....        | 51                       | 40    | 92                  | 9                 | 8     | 16                  | 60  | 48    | 108                 | 35                       | 34    |
| Arizona.....        | 55                       | 37    | 58                  | 14                | 10    | 11                  | 69  | 47    | 69                  | 33                       | 35    |
| West Virginia.....  | 38                       | 26    | 43                  | 19                | 16    | 22                  | 57  | 42    | 65                  | 36                       | 36    |
| Utah.....           | 34                       | 29    | 48                  | 10                | 9     | 12                  | 44  | 38    | 60                  | 38                       | 37    |
| Maryland.....       | 26                       | 19    | 25                  | 18                | 16    | 21                  | 44  | 35    | 46                  | 39                       | 38    |
| Florida.....        | 33                       | 23    | 36                  | 12                | 11    | 13                  | 45  | 34    | 40                  | 37                       | 39    |
| Vermont.....        | 27                       | 22    | 29                  | 10                | 8     | 12                  | 37  | 30    | 41                  | 40                       | 40    |
| New Jersey.....     | 21                       | 16    | 21                  | 11                | 11    | 14                  | 32  | 27    | 35                  | 41                       | 41    |
| Maine.....          | 17                       | 13    | 19                  | 14                | 12    | 16                  | 31  | 25    | 35                  | 42                       | 42    |
| Massachusetts.....  | 21                       | 17    | 20                  | 7                 | 7     | 9                   | 28  | 24    | 29                  | 43                       | 43    |
| Nevada.....         | 23                       | 18    | 38                  | 3                 | 2     | 5                   | 26  | 20    | 43                  | 44                       | 44    |
| Connecticut.....    | 15                       | 12    | 15                  | 5                 | 5     | 7                   | 20  | 17    | 22                  | 45                       | 45    |
| New Hampshire.....  | 11                       | 9     | 12                  | 5                 | 4     | 6                   | 18  | 13    | 18                  | 46                       | 46    |
| Delaware.....       | 4                        | 3     | 4                   | 3                 | 3     | 4                   | 7   | 6     | 8                   | 47                       | 47    |
| Rhode Island.....   | 3                        | 3     | 3                   | 1                 | 1     | 1                   | 4   | 4     | 4                   | 48                       | 48    |
| Total.....          | 4,199                    | 2,954 | 4,849               | 2,256             | 1,826 | 2,758               | 6,455   | 4,780 | 7,607               | .....                    | ..... |

## LIVE-STOCK PRICES.

TABLE 378.—Farm prices of live stock, by ages or classes, United States, 1916-1922.

| Classes.                         | 1916    | 1917    | 1918    | 1919    | 1920    | 1921    | 1922    |
|----------------------------------|---------|---------|---------|---------|---------|---------|---------|
| <b>Horses:</b>                   |         |         |         |         |         |         |         |
| Under 1 year old.....            | \$44.30 | \$45.17 | \$45.20 | \$42.62 | \$37.22 | \$31.57 | \$26.28 |
| 1 and under 2 years.....         | 69.02   | 70.21   | 70.21   | 65.94   | 58.88   | 49.72   | 41.19   |
| 2 years and over.....            | 111.28  | 112.64  | 114.30  | 108.17  | 103.53  | 90.70   | 75.97   |
| <b>Mules:</b>                    |         |         |         |         |         |         |         |
| Under 1 year old.....            | 51.47   | 53.98   | 57.61   | 59.14   | 60.12   | 47.49   | 35.18   |
| 1 and under 2 years.....         | 76.69   | 80.28   | 86.32   | 89.14   | 90.48   | 71.76   | 53.10   |
| 2 years and over.....            | 123.59  | 128.17  | 139.88  | 147.65  | 160.54  | 126.39  | 95.54   |
| <b>Other cattle (than milk):</b> |         |         |         |         |         |         |         |
| Under 1 year.....                | 19.08   | 20.71   | 23.44   | 24.97   | 24.50   | 17.42   | 13.43   |
| 1 and under 2 years.....         | 31.45   | 33.93   | 38.63   | 41.74   | 40.69   | 29.01   | 22.32   |
| 2 years and over.....            | 45.31   | 48.63   | 55.62   | 60.41   | 59.65   | 43.72   | 32.65   |
| <b>Sheep:</b>                    |         |         |         |         |         |         |         |
| Under 1 year.....                | 4.13    | 5.63    | 9.06    | 8.82    | 8.06    | 5.34    | 4.22    |
| Ewes 1 year and over.....        | 5.35    | 7.48    | 12.70   | 12.44   | 11.08   | 6.37    | 4.84    |
| Wethers 1 year and over.....     | 5.02    | 6.78    | 11.26   | 11.02   | 9.60    | 5.93    | 4.07    |
| Rams.....                        | 10.32   | 13.62   | 20.84   | 21.90   | 21.63   | 15.10   | 11.36   |

## LIVE-STOCK MARKETINGS.

TABLE 379.—Yearly marketings of live stock at principal markets, 1900-1921.

The combined receipts and shipments of cattle, hogs, and sheep at Chicago, Kansas City, Omaha, St. Louis, Sioux City, St. Joseph, and St. Paul yearly since 1900 were as follows:

| Year.     | Cattle.    |            | Hogs.      |            | Sheep.     |            |
|-----------|------------|------------|------------|------------|------------|------------|
|           | Receipts.  | Shipments. | Receipts.  | Shipments. | Receipts.  | Shipments. |
| 1900..... | 7,179,344  | 3,793,308  | 18,573,177 | 5,336,826  | 7,061,466  | 2,500,686  |
| 1901..... | 7,708,839  | 3,838,460  | 28,339,864 | 5,772,717  | 7,798,359  | 2,712,866  |
| 1902..... | 8,375,408  | 4,292,705  | 17,289,427 | 4,130,675  | 9,177,050  | 3,561,060  |
| 1903..... | 8,878,789  | 4,490,748  | 16,780,250 | 4,233,572  | 9,680,692  | 3,983,310  |
| 1904..... | 8,690,699  | 4,552,554  | 17,778,827 | 5,254,545  | 9,604,812  | 4,203,834  |
| 1905..... | 9,202,083  | 4,664,753  | 18,988,933 | 5,614,306  | 10,572,259 | 4,725,872  |
| 1906..... | 9,373,825  | 5,026,689  | 19,223,792 | 5,440,333  | 10,864,437 | 5,046,386  |
| 1907..... | 9,590,710  | 5,360,790  | 19,544,617 | 5,993,069  | 9,857,877  | 4,549,000  |
| 1908..... | 8,827,360  | 4,936,731  | 22,863,701 | 7,288,403  | 9,833,640  | 4,489,295  |
| 1909..... | 9,189,312  | 5,181,446  | 18,420,012 | 6,381,667  | 10,284,858 | 4,172,388  |
| 1910..... | 9,116,687  | 5,122,984  | 14,853,472 | 4,628,760  | 12,366,375 | 6,013,215  |
| 1911..... | 8,629,109  | 4,805,766  | 19,926,547 | 6,418,245  | 13,521,492 | 5,891,084  |
| 1912..... | 8,061,494  | 4,318,648  | 19,771,825 | 6,096,906  | 13,733,980 | 5,369,402  |
| 1913..... | 7,904,552  | 4,596,085  | 19,924,331 | 6,414,815  | 14,037,830 | 6,048,260  |
| 1914..... | 7,182,239  | 3,933,663  | 18,272,091 | 5,816,069  | 13,272,491 | 5,331,449  |
| 1915..... | 7,963,591  | 3,944,152  | 21,031,405 | 6,823,983  | 11,160,246 | 4,370,504  |
| 1916..... | 9,319,861  | 4,713,700  | 25,345,802 | 8,264,752  | 11,639,022 | 4,640,615  |
| 1917..... | 11,241,038 | 5,676,015  | 20,945,301 | 5,173,567  | 10,017,353 | 3,648,937  |
| 1918..... | 12,936,088 | 6,596,074  | 25,461,514 | 5,368,431  | 12,064,416 | 4,709,595  |
| 1919..... | 12,151,920 | 5,266,392  | 25,280,245 | 6,041,663  | 14,307,503 | 5,701,848  |
| 1920..... | 9,969,911  | 4,581,771  | 22,433,301 | 6,304,630  | 11,117,479 | 4,157,730  |
| 1921..... | 8,675,963  | 4,104,494  | 22,080,870 | 6,841,880  | 11,755,676 | 3,610,311  |

Figures for 1900-1909, inclusive, were taken from the Monthly Summary of Commerce and Finance of the United States; 1910 and subsequently from official reports of the stockyards in the cities mentioned. The receipts of calves (not included in "Cattle") at the stockyards of Chicago, Kansas City, St. Joseph, St. Paul, and Sioux City, combined, were about 1,833,196 in 1921, 1,845,958 in 1920, 1,589,491 in 1919, 1,361,787 in 1918, 1,180,063, in 1917, 918,778 in 1916, 726,145 in 1915, 664,000 in 1914, 741,000 in 1913, about 610,000 in 1912, 975,000 in 1911, 981,000 in 1910, and 869,000 in 1909.

THE FEDERAL MEAT INSPECTION.

Some of the principal facts connected with the Federal meat inspection as administered by the Bureau of Animal Industry are shown in the following tables. The figures cover the annual totals beginning with the fiscal year 1907, which was the first year of operations under the meat-inspection law now in force. The data given comprise the number of establishments at which inspection is conducted; the number of animals of each species inspected at slaughter; the number of each species condemned, both wholly and in part, and the percentage condemned of each species and of all animals; the quantity of meat products prepared or processed under Federal supervision, and the quantity and percentage of the latter condemned. Further details of the Federal meat inspection are published each year in the annual report of the Chief of the Bureau of Animal Industry.

TABLE 380.—Number of establishments inspected and total number of animals slaughtered under Federal inspection annually, 1907 to 1921.

| Year ended June 30— | Estab-<br>lish-<br>ments. | Cattle.    | Calves.   | Swine.     | Sheep.     | Goats.  | All<br>animals. |
|---------------------|---------------------------|------------|-----------|------------|------------|---------|-----------------|
| 1907.....           | 708                       | 7,621,717  | 1,763,574 | 31,815,900 | 9,681,876  | 52,149  | 50,935,216      |
| 1908.....           | 787                       | 7,118,275  | 1,995,487 | 35,113,077 | 9,702,545  | 45,953  | 53,973,337      |
| 1909.....           | 876                       | 7,325,337  | 2,046,711 | 35,427,931 | 10,802,903 | 69,193  | 56,672,075      |
| 1910.....           | 919                       | 7,962,189  | 2,295,099 | 27,656,021 | 11,149,937 | 115,811 | 49,179,057      |
| 1911.....           | 936                       | 7,781,030  | 2,219,908 | 29,916,363 | 13,005,502 | 54,145  | 52,976,948      |
| 1912.....           | 940                       | 7,532,005  | 2,242,929 | 34,966,378 | 14,208,724 | 63,983  | 59,014,019      |
| 1913.....           | 910                       | 7,155,816  | 2,098,484 | 32,287,538 | 14,724,454 | 56,556  | 56,322,589      |
| 1914.....           | 893                       | 6,724,117  | 1,814,904 | 33,289,705 | 14,958,834 | 121,827 | 56,909,387      |
| 1915.....           | 896                       | 6,964,402  | 1,735,902 | 36,247,958 | 12,909,089 | 165,533 | 58,022,884      |
| 1916.....           | 875                       | 7,404,288  | 2,048,022 | 40,482,799 | 11,985,926 | 180,356 | 62,101,391      |
| 1917.....           | 833                       | 6,299,489  | 2,679,745 | 40,210,847 | 11,343,418 | 174,649 | 63,708,148      |
| 1918.....           | 884                       | 10,938,287 | 3,323,077 | 35,449,247 | 8,769,498  | 149,503 | 58,629,612      |
| 1919.....           | 895                       | 11,241,991 | 3,674,227 | 44,398,389 | 11,268,870 | 125,660 | 70,708,637      |
| 1920.....           | 897                       | 9,709,819  | 4,227,558 | 38,981,914 | 12,334,827 | 77,270  | 165,332,427     |
| 1921.....           | 892                       | 8,179,572  | 3,896,207 | 37,702,866 | 12,452,435 | 20,027  | 162,252,442     |

<sup>1</sup> Including 1,089 horses slaughtered in 1920 and 1,335 in 1921.

TABLE 381.—Condemnations of animals at slaughter, 1907-1921.

| Year ended June 30— | Cattle. |         |                        | Calves. |       |                        | Swine.  |         |                        |
|---------------------|---------|---------|------------------------|---------|-------|------------------------|---------|---------|------------------------|
|                     | Whole.  | Part.   | Per cent. <sup>1</sup> | Whole.  | Part. | Per cent. <sup>1</sup> | Whole.  | Part.   | Per cent. <sup>1</sup> |
| 1907.....           | 27,933  | 93,174  | 1.58                   | 6,414   | 245   | 0.38                   | 105,879 | 436,161 | 1.70                   |
| 1908.....           | 35,216  | 67,432  | 1.41                   | 5,854   | 396   | .31                    | 127,933 | 636,589 | 2.18                   |
| 1909.....           | 38,103  | 99,739  | 1.84                   | 8,213   | 409   | .42                    | 86,912  | 799,300 | 2.50                   |
| 1910.....           | 42,426  | 122,167 | 2.07                   | 7,524   | 500   | .35                    | 52,439  | 720,829 | 2.32                   |
| 1911.....           | 39,402  | 123,969 | 2.10                   | 7,654   | 781   | .38                    | 59,477  | 877,528 | 3.13                   |
| 1912.....           | 50,363  | 134,783 | 2.46                   | 8,927   | 1,212 | .45                    | 129,002 | 323,962 | 1.30                   |
| 1913.....           | 50,775  | 130,139 | 2.53                   | 9,216   | 1,877 | .50                    | 173,637 | 373,693 | 1.70                   |
| 1914.....           | 48,356  | 138,085 | 2.77                   | 6,696   | 1,294 | .44                    | 204,942 | 422,276 | 1.89                   |
| 1915.....           | 52,496  | 178,409 | 3.32                   | 5,941   | 1,750 | .42                    | 213,905 | 464,217 | 1.87                   |
| 1916.....           | 57,579  | 188,915 | 3.33                   | 6,681   | 1,988 | .44                    | 195,107 | 546,200 | 1.83                   |
| 1917.....           | 78,708  | 249,637 | 3.53                   | 10,112  | 2,927 | .49                    | 188,480 | 528,288 | 1.71                   |
| 1918.....           | 68,166  | 178,940 | 2.26                   | 8,109   | 2,808 | .31                    | 113,070 | 347,006 | 1.30                   |
| 1919.....           | 59,549  | 166,701 | 2.01                   | 9,202   | 2,479 | .32                    | 128,805 | 433,433 | 1.27                   |
| 1920.....           | 58,602  | 194,058 | 2.60                   | 13,820  | 2,866 | .39                    | 133,476 | 550,580 | 1.75                   |
| 1921.....           | 46,854  | 176,762 | 2.73                   | 7,703   | 2,323 | .26                    | 122,609 | 462,132 | 1.63                   |
| Average:            |         |         |                        |         |       |                        |         |         |                        |
| 1907-1910.....      | 34,670  | 95,640  | 1.74                   | 7,001   | 888   | .36                    | 93,291  | 649,720 | 2.29                   |
| 1911-1915.....      | 48,278  | 141,077 | 2.62                   | 7,687   | 1,271 | .44                    | 156,253 | 402,401 | 1.85                   |
| 1916-1920.....      | 64,518  | 196,668 | 2.68                   | 9,585   | 2,514 | .38                    | 145,789 | 481,199 | 1.87                   |

<sup>1</sup> Includes both whole and parts. It should be understood that the parts here recorded are primal parts; a much larger number of less important parts, especially in swine, are condemned in addition.

TABLE 381.—*Condemnations of animals at slaughter, 1907-1921—Continued.*

| Year ended June 30— | Sheep. |        |                        | Goats. |       |                        | All animals. |           |                        |
|---------------------|--------|--------|------------------------|--------|-------|------------------------|--------------|-----------|------------------------|
|                     | Whole. | Part.  | Per cent. <sup>1</sup> | Whole. | Part. | Per cent. <sup>1</sup> | Whole.       | Part.     | Per cent. <sup>1</sup> |
| 1907.....           | 9,524  | 296    | 0.10                   | 42     | ..... | 0.08                   | 149,792      | 529,876   | 1.33                   |
| 1908.....           | 8,090  | 198    | .09                    | 33     | 1     | .07                    | 175,126      | 704,666   | 1.63                   |
| 1909.....           | 10,747 | 179    | .10                    | 82     | 1     | .12                    | 141,057      | 899,628   | 1.87                   |
| 1910.....           | 11,127 | 24,714 | .32                    | 226    | 1     | .19                    | 113,742      | 874,211   | 2.01                   |
| 1911.....           | 10,789 | 7,394  | .14                    | 61     | ..... | .11                    | 117,383      | 1,009,672 | 2.13                   |
| 1912.....           | 15,402 | 3,871  | .13                    | 84     | 1     | .13                    | 203,778      | 463,859   | 1.13                   |
| 1913.....           | 16,657 | 939    | .12                    | 76     | 1     | .14                    | 250,661      | 506,449   | 1.34                   |
| 1914.....           | 20,563 | 1,564  | .15                    | 746    | 8     | .62                    | 281,303      | 568,166   | 1.48                   |
| 1915.....           | 17,611 | 298    | .14                    | 653    | 14    | .40                    | 290,606      | 644,688   | 1.61                   |
| 1916.....           | 15,067 | 1,007  | .13                    | 663    | 161   | .46                    | 275,087      | 738,361   | 1.63                   |
| 1917.....           | 16,749 | 437    | .15                    | 1,349  | 42    | .80                    | 265,396      | 781,331   | 1.64                   |
| 1918.....           | 12,564 | 227    | .15                    | 419    | 1     | .28                    | 202,327      | 528,482   | 1.25                   |
| 1919.....           | 14,371 | 330    | .13                    | 318    | 17    | .27                    | 212,245      | 603,050   | 1.15                   |
| 1920.....           | 20,028 | 627    | .17                    | 135    | 1     | .18                    | * 226,125    | * 748,136 | 1.49                   |
| 1921.....           | 12,666 | 270    | .10                    | 23     | 10    | .16                    | * 189,874    | * 671,504 | 1.38                   |
| Average:            |        |        |                        |        |       |                        |              |           |                        |
| 1907-1910.....      | 9,872  | 6,347  | .16                    | 96     | 1     | .14                    | 144,929      | 752,095   | 1.71                   |
| 1911-1915.....      | 16,204 | 2,813  | .14                    | 324    | 6     | .36                    | 228,746      | 637,567   | 1.53                   |
| 1916-1920.....      | 15,754 | 526    | .15                    | 577    | 44    | .44                    | 236,236      | 679,872   | 1.43                   |

<sup>1</sup> Includes both whole and parts. It should be understood that the parts here recorded are primal parts; a much larger number of less important parts, especially in swine, are condemned in addition.

\* Includes condemnation of horses: Whole, 64, part 4, for 1920; and whole, 19, part 7, for 1921.

TABLE 382.—*Quantity of meat and meat food products prepared, and quantity and percentage condemned, under Federal supervision annually, 1907 to 1921.*

| Year ended June 30— | Prepared or processed. | Con-demned.    | Per centage con-demned. | Year ended June 30— | Prepared or processed. | Con-demned.    | Per centage con-demned. |
|---------------------|------------------------|----------------|-------------------------|---------------------|------------------------|----------------|-------------------------|
|                     | <i>Pounds.</i>         | <i>Pounds.</i> | <i>Per cent.</i>        |                     | <i>Pounds.</i>         | <i>Pounds.</i> | <i>Per cent.</i>        |
| 1907.....           | 4,464,213,208          | 14,874,687     | 0.33                    | 1917.....           | 7,663,633,957          | 19,857,270     | 0.26                    |
| 1908.....           | 5,958,298,364          | 43,344,206     | .73                     | 1918.....           | 7,906,184,924          | 17,543,184     | .22                     |
| 1909.....           | 6,791,437,082          | 24,679,754     | .36                     | 1919.....           | 9,189,042,049          | 30,323,320     | .33                     |
| 1910.....           | 6,223,964,593          | 19,031,808     | .31                     | 1920.....           | 7,755,158,142          | 18,201,648     | .23                     |
| 1911.....           | 6,934,233,214          | 21,073,577     | .31                     | 1921.....           | 7,127,820,473          | 14,079,435     | .20                     |
| 1912.....           | 7,279,558,956          | 18,096,587     | .25                     | Average:            |                        |                |                         |
| 1913.....           | 7,094,809,809          | 18,851,930     | .27                     | 1907-1910.....      | 5,859,478,299          | 25,432,539     | .43                     |
| 1914.....           | 7,033,295,975          | 19,135,469     | .27                     | 1911-1915.....      | 7,174,993,691          | 19,187,537     | .27                     |
| 1915.....           | 7,533,070,002          | 18,780,122     | .25                     | 1916-1920.....      | 7,993,452,253          | 20,764,558     | .26                     |
| 1916.....           | 7,474,242,192          | 17,897,367     | .24                     |                     |                        |                |                         |

The principal items in Table 382, in the order of magnitude, are: Cured pork, lard, sausage, canned beef, lard substitutes, and oleo products. The list includes a large number of less important items.

It should be understood that the above products are entirely separate and additional to the carcass inspection at time of slaughter. They are, in fact, reinspections of such portions of the carcass as have subsequently undergone some process of manufacture.

TABLE 383.—*Quantity of meat and meat food products imported, and quantity and percentage condemned or refused entry, 1914 to 1921.*

| Year ended June 30—  | Total imported. | Con-demned.    | Refused entry. | Percentage condemned or refused. |
|----------------------|-----------------|----------------|----------------|----------------------------------|
|                      | <i>Pounds.</i>  | <i>Pounds.</i> | <i>Pounds.</i> | <i>Per cent.</i>                 |
| 1914 (9 months)..... | 197,889,348     | 551,859        | .....          | 0.28                             |
| 1915.....            | 245,028,437     | 2,020,291      | 70,454         | .85                              |
| 1916.....            | 110,514,476     | 298,276        | 113,907        | .37                              |
| 1917.....            | 28,138,999      | 382,160        | 14,611         | 1.36                             |
| 1918.....            | 59,026,494      | 999,919        | 414,452        | 2.38                             |
| 1919.....            | 179,811,142     | 340,358        | 501,802        | .47                              |
| 1920.....            | 77,781,329      | 229,838        | 392,166        | .80                              |
| 1921.....            | 162,042,627     | 419,009        | 103,703        | .32                              |

# IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS.<sup>1</sup>

[Compiled in the Bureau of Markets and Crop Estimates from reports of the Foreign Commerce and Navigation of the United States, United States Department of Commerce.]

TABLE 384.—*Agricultural imports of the United States during the 3 years ending Dec. 31, 1920.*

[The figures are in round thousands, i. e., 000 omitted.]

| Article imported.   | Year ending Dec. 31— |                  |              |                  |              |                  |
|---|----------------------|------------------|--------------|------------------|--------------|------------------|
|   | 1918                 |                  | 1919         |                  | 1920         |                  |
|   | Quantity.            | Value.           | Quantity.    | Value.           | Quantity.    | Value.           |
| <b>ANIMAL MATTER.</b>                                       |                      |                  |              |                  |              |                  |
| <b>Animals, live:</b>                                       | <i>Thou-</i>         | <i>Thou-</i>     | <i>Thou-</i> | <i>Thou-</i>     | <i>Thou-</i> | <i>Thou-</i>     |
| Cattle <sup>2</sup> .....number.....                        | sands. 353           | sands. \$25, 519 | sands. 642   | sands. \$53, 296 | sands. 379   | sands. \$27, 419 |
| Horses <sup>2</sup> .....do.....                            | 4                    | 730              | 5            | 803              | 4            | 1, 089           |
| Sheep <sup>2</sup> .....do.....                             | 150                  | 1, 654           | 225          | 2, 473           | 173          | 1, 730           |
| Swine.....do.....   | 7                    | 136              | 21           | 758              | 1            | 23               |
| All other, including fowls.....                             |                      | 493              |              | 707              |              | 1, 291           |
| Total live animals.....                                     |                      | 23, 632          |              | 58, 037          |              | 31, 552          |
| Beeswax.....pounds.....                                     | 1, 558               | 584              | 2, 384       | 896              | 4, 143       | 1, 418           |
| <b>Dairy products:</b>                                      |                      |                  |              |                  |              |                  |
| Butter.....do.....  | 1, 655               | 530              | 9, 519       | 4, 360           | 37, 454      | 18, 646          |
| Cheese.....do.....  | 7, 562               | 3, 059           | 11, 332      | 4, 073           | 15, 994      | 5, 657           |
| Milk and cream.....   |                      | \$ 1, 648        |              |                  |              |                  |
| Fresh.....gallons.....                                      | 41, 350              | 4 727            | 3, 685       | 1, 850           | 4, 118       | 2, 702           |
| Condensed.....pounds.....                                   | 410, 905             | 4 922            | 16, 509      | 2, 030           | 23, 756      | 3, 332           |
| Total dairy products.....                                   |                      | 6, 940           |              | 12, 863          |              | 30, 337          |
| Eggs.....dozen.....   | 1, 245               | 363              | 1, 247       | 395              | 1, 709       | 618              |
| Egg albumen.....pounds.....                                 | 41, 337              | 4 503            | 7, 973       | 6, 061           | 9, 111       | 4, 593           |
| Eggs, dried, frozen, etc.....do.....                        | 6, 732               | 2, 460           | 24, 591      | 8, 470           | 29, 023      | 7, 234           |
| Feathers and downs, crude:                                  |                      |                  |              |                  |              |                  |
| Ostrich.....do.....   | (5)                  | 676              | 309          | 2, 698           | 143          | 1, 083           |
| Other.....do.....   | (5)                  | 344              | 1, 600       | 853              | 3, 720       | 1, 509           |
| <b>Fibers, animal:</b>                                      |                      |                  |              |                  |              |                  |
| Silk—   |                      |                  |              |                  |              |                  |
| Cocoons.....do.....   | 220                  | 297              | 352          | 487              | 201          | 315              |
| Raw, or as reeled from the co-                              |                      |                  |              |                  |              |                  |
| coons.....pounds.....                                       | 32, 865              | 180, 210         | 44, 317      | 329, 339         | 30, 068      | 284, 891         |
| Waste.....do.....   | 15, 635              | 13, 692          | 9, 853       | 12, 061          | 9, 401       | 15, 832          |
| Totalsilk.....do.....                                       | 48, 720              | 194, 199         | 55, 522      | 341, 887         | 39, 660      | 301, 038         |
| Wool and hair of the camel, goat, alpaca, and like animals— |                      |                  |              |                  |              |                  |
| Class 1, clothing.....pounds.....                           | 373, 911             | 216, 790         | 334, 100     | 171, 289         | 212, 392     | 100, 001         |
| Class 2, combing.....do.....                                | 4, 223               | 2, 647           | 7, 734       | 4, 584           | 6, 643       | 3, 334           |
| Class 3, carpets.....do.....                                | 69, 292              | 29, 256          | 96, 948      | 36, 898          | 35, 870      | 11, 564          |
| Hair of the angora goat, alpaca, etc.....pounds.....        | 6, 301               | 3, 080           | 7, 111       | 3, 994           | 4, 712       | 2, 572           |
| Total wool.....do.....                                      | 453, 727             | 251, 773         | 445, 893     | 216, 765         | 259, 617     | 126, 971         |
| Gelatin.....do.....   | 83                   | 32               | 449          | 242              | 2, 313       | 1, 225           |
| Glue and glue size.....do.....                              | 732                  | 173              | 386          | 209              | 2, 777       | 662              |
| Honey.....gallons.....                                      | 407                  | 657              | 454          | 566              | 990          | 1, 335           |

<sup>1</sup> Forest products come within the scope of the Department of Agriculture and are therefore included in alphabetical order in these tables.

<sup>2</sup> Including all imported free of duty.

<sup>3</sup> Jan. 1 to June 30.

<sup>4</sup> July 1 to Dec. 31.

<sup>5</sup> Not stated.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article imported.                                     | Year ending Dec. 31— |                  |               |               |               |               |
|---|----------------------|------------------|---------------|---------------|---------------|---------------|
|   | 1918                 |                  | 1919          |               | 1920          |               |
|   | Quantity.            | Value.           | Quantity.     | Value.        | Quantity.     | Value.        |
| <b>ANIMAL MATTER—continued.</b>                       | <i>Thou-</i>         | <i>Thou-</i>     | <i>Thou-</i>  | <i>Thou-</i>  | <i>Thou-</i>  | <i>Thou-</i>  |
| <b>Packing-house products:</b>                        | <i>sands.</i>        | <i>sands.</i>    | <i>sands.</i> | <i>sands.</i> | <i>sands.</i> | <i>sands.</i> |
| Blood, dried.....pounds..                             | (1)                  | \$639            | 11,004        | \$380         | 14,463        | \$575         |
| Bones, hoofs, and horns.....do..                      | (1)                  | 685              | 50,388        | 841           | 175,067       | 3,338         |
| Bristles.....do..                                     | 4,151                | 5,705            | 3,159         | 6,035         | 4,945         | 10,388        |
| Grease.....do..                                       | (1)                  | 3,559            | 33,871        | 3,304         | 26,323        | 2,843         |
| <b>Hair—</b>  |                      |                  |               |               |               |               |
| Horse.....do..  | 2,880                | 998              | 4,015         | 1,644         | 4,896         | 2,202         |
| Other animal.....do..                                 | 3,476                | 317              | 4,545         | 542           | 6,770         | 1,218         |
| Hide cuttings and other glue stock.....pounds..       | 9,882                | 455              | 13,781        | 979           | 36,856        | 2,239         |
| <b>Hides and skins, other than furs—</b>              |                      |                  |               |               |               |               |
| Buffalo hides, dry.....pounds..                       | 5,819                | 1,547            | 15,620        | 3,463         | 9,494         | 2,721         |
| Cabretta.....do..                                     |                      |                  | 94            | 86            | 12            | 14            |
| Calfskins—  |                      |                  |               |               |               |               |
| Dry.....do..  | 5,489                | 2,237            | 42,325        | 20,914        | 16,903        | 9,980         |
| Green or pickled.....do..                             | 2,093                | 717              | 22,230        | 12,769        | 18,230        | 9,271         |
| Cattle hides.....do..                                 | 34,836               | 10,157           | 96,190        | 34,367        | 59,150        | 21,062        |
| Green or pickled.....do..                             | 188,215              | 41,873           | 311,062       | 91,224        | 216,174       | 64,383        |
| Goat skins—   |                      |                  |               |               |               |               |
| Dry.....do..  | 53,306               | 28,643           | 111,134       | 85,828        | 69,877        | 82,415        |
| Green or pickled.....do..                             | 9,058                | 1,847            | 22,523        | 9,729         | 10,327        | 6,225         |
| Horse and ass skins—                                  |                      |                  |               |               |               |               |
| Dry.....do..  | 873                  | 183              | 12,077        | 3,612         | 5,043         | 1,620         |
| Green or pickled.....do..                             | 4,125                | 536              | 15,976        | 3,633         | 11,803        | 2,636         |
| Kangaroo.....do..                                     | 679                  | 733              | 1,384         | 1,363         | 1,389         | 1,481         |
| Sheepskins <sup>2</sup> —                             |                      |                  |               |               |               |               |
| Dry.....do..  | 21,530               | 7,532            | 43,560        | 21,286        | 29,833        | 17,395        |
| Green or pickled.....do..                             | 30,934               | 9,870            | 41,471        | 15,232        | 52,916        | 20,830        |
| Other.....do..  | 6,933                | 2,168            | 9,159         | 3,031         | 9,098         | 3,815         |
| Total hides and skins.....do..                        | 361,890              | 108,043          | 744,835       | 306,509       | 510,239       | 243,878       |
| <b>Meat—</b>  |                      |                  |               |               |               |               |
| <b>Cured—</b>   |                      |                  |               |               |               |               |
| Bacon and hams.....do..                               | 1,863                | 544              | 2,646         | 788           | 755           | 235           |
| Meat prepared or preserved.....pounds..               | (1)                  | 38,201           | 21,190        | 5,838         | 7,199         | 1,610         |
| Sausage, bologna.....do..                             | 5                    | 3                | 72            | 43            | 157           | 74            |
| <b>Fresh—</b>   |                      |                  |               |               |               |               |
| Beef and veal.....do..                                | 23,339               | 4,159            | 38,462        | 6,408         | 50,182        | 8,057         |
| Mutton and lamb.....do..                              | 608                  | 134              | 8,209         | 1,547         | 101,168       | 12,645        |
| Pork.....do..   | 1,722                | 377              | 2,779         | 601           | 1,541         | 415           |
| Other, including meat extracts.....pounds..           | (1)                  | 7,338            | 8,596         | 1,838         | 7,448         | 2,009         |
| Total meat.....do..                                   |                      | 50,756           |               | 17,063        |               | 25,045        |
| Oleo stearin.....pounds..                             | 1,557                | 250              | 2,358         | 475           | 963           | 181           |
| Rennets.....do..                                      | (1)                  | 79               | 103           | 147           | 250           | 141           |
| Sausage casings.....do..                              | (1)                  | 3,508            | 11,234        | 5,629         | 12,138        | 7,049         |
| Tallow.....do..                                       | <sup>3</sup> 5,395   | <sup>4</sup> 702 | 12,096        | 1,813         | 14,875        | 1,842         |
| Total packing-house products.....do..                 |                      | 175,690          |               | 345,361       |               | 300,939       |
| Total animal matter.....do..                          |                      | 663,532          |               | 995,303       |               | 810,521       |
| <b>VEGETABLE MATTER.</b>                              |                      |                  |               |               |               |               |
| Argols or wine lees.....pounds..                      | 27,687               | 4,825            | 25,736        | 4,287         | 35,577        | 4,465         |
| Breadstuffs. ( <i>See Grain and grain products.</i> ) |                      |                  |               |               |               |               |
| Broom corn.....long tons..                            | 2                    | 365              | (1)           | 2             | 1             | 77            |
| Chicory root, prepared.....pounds..                   |                      |                  | (1)           | (1)           | 9,115         | 620           |
| <b>Cocoa and chocolate:</b>                           |                      |                  |               |               |               |               |
| Cocoa, crude, leaves and shells of.....do..           | 359,960              | 37,955           | 391,397       | 57,996        | 343,667       | 54,308        |
| Cocoa and chocolate, prepared.....do..                | 56                   | 17               | 967           | 342           | 1,319         | 503           |
| Total cocoa and chocolate.....do..                    | 360,016              | 37,972           | 392,364       | 58,341        | 344,986       | 54,811        |

<sup>1</sup> Not stated.<sup>2</sup> Except sheepskins with the wool on.<sup>3</sup> July 1 to Dec. 31.<sup>4</sup> Less than 500.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article imported.  | Year ending Dec. 31— |                 |                 |                 |                 |                 |
|--|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|  | 1918                 |                 | 1919            |                 | 1920            |                 |
|  | Quantity.            | Value.          | Quantity.       | Value.          | Quantity.       | Value.          |
|  | Thou-<br>sands.      | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands. |
| VEGETABLE MATTER—continued.                              |                      |                 |                 |                 |                 |                 |
| Coffee.....pounds.                                       | 1,052,202            | \$99,423        | 1,337,564       | \$261,270       | 1,297,439       | \$252,451       |
| Fibers, vegetable:                                       |                      |                 |                 |                 |                 |                 |
| Cotton.....do.   | 112,684              | 41,624          | 175,358         | 71,886          | 299,994         | 138,744         |
| Flax.....long tons.                                      | 8                    | 7,362           | 4               | 3,997           | 7               | 3,849           |
| Hemp.....do.   | 4                    | 1,982           | 2               | 954             | 8               | 3,226           |
| Isle.....do.   | 32                   | 3,649           | 21              | 2,523           | 24              | 3,335           |
| Jute and jute butts.....do.                              | 71                   | 6,463           | 62              | 3,284           | 96              | 9,693           |
| Kapoc.....do.  | 10                   | 2,820           | 11              | 3,673           | 10              | 3,348           |
| Manila.....do.   | 79                   | 29,333          | 69              | 19,255          | 67              | 20,515          |
| New Zealand flax.....do.                                 | 14                   | 4,868           | 7               | 1,641           | 6               | 1,034           |
| Sisal grass.....do.                                      | 152                  | 54,937          | 145             | 39,554          | 181             | 33,535          |
| Other.....do.  | 14                   | 2,973           | 7               | 1,797           | 7               | 1,342           |
| Total vegetable fibers.....                              |                      | 156,011         |                 | 153,664         |                 | 219,121         |
| Forest products:   |                      |                 |                 |                 |                 |                 |
| Cinchona bark.....pounds.                                | 3,508                | 792             | 5,981           | 1,076           | 4,068           | 1,526           |
| Cork, wood and bark.....do.                              | (1)                  | \$ 1,898        | 28,287          | 1,803           | 63,972          | 2,725           |
| Dyewood extracts.....do.                                 | \$ 1,459             | \$ 183          | 1,157           | 210             | 1,156           | 170             |
| Dyewoods—  |                      |                 |                 |                 |                 |                 |
| Logwood.....long tons.                                   | 30                   | 668             | 29              | 550             | 73              | 2,187           |
| Other.....do.  | 31                   | 796             | 2               | 38              | 4               | 70              |
| Total dyewoods.....do.                                   | 61                   | 1,464           | 31              | 588             | 77              | 2,257           |
| Gums—  |                      |                 |                 |                 |                 |                 |
| Arabic or Senegal.....pounds.                            | \$ 4,461             | \$ 816          | 5,943           | 819             | 6,498           | 764             |
| Camphor—   |                      |                 |                 |                 |                 |                 |
| Crude.....do.  | 3,474                | 1,547           | 2,694           | 2,506           | 3,833           | 5,207           |
| Refined.....do.  | 947                  | 770             | 2,125           | 3,830           | 1,144           | 2,246           |
| Chicle.....do.   | 7,251                | 3,917           | 9,446           | 6,217           | 9,860           | 6,749           |
| Copal, kauri, and damar.....do.                          | 33,664               | 3,250           | 20,326          | 2,083           | 69,334          | 9,696           |
| Gambier, or terra japonica.....do.                       | 8,764                | 932             | 4,745           | 432             | 10,095          | 807             |
| India rubber, gutta-percha, etc.—                        |                      |                 |                 |                 |                 |                 |
| Balata.....pounds.                                       | 1,547                | 838             | 1,628           | 937             | 2,384           | 1,260           |
| Guayule gum.....do.                                      | 1,376                | 413             | 3,204           | 761             | 1,699           | 346             |
| Gutta joolatong or East Indian gum.....pounds.           | 9,932                | 684             | 18,663          | 2,214           | 12,706          | 2,069           |
| Gutta-percha.....do.                                     | 1,203                | 226             | 6,496           | 1,009           | 7,129           | 1,520           |
| India rubber.....do.                                     | 325,959              | 146,378         | 535,940         | 215,820         | 566,546         | 242,796         |
| Total India rubber, etc. do.                             | 340,022              | 148,537         | 565,931         | 220,801         | 590,404         | 247,991         |
| Shellac.....do.  | 18,664               | 9,029           | 24,426          | 11,869          | 28,587          | 23,089          |
| Other.....do.  | (1)                  | 1,903           | 11,291          | 3,867           | 12,990          | 3,756           |
| Total gums.....do.                                       |                      | 170,721         | 646,927         | 251,944         | 732,805         | 300,205         |
| Ivory, vegetable.....do.                                 | 41,142               | 1,323           | 31,779          | 1,172           | 49,690          | 2,551           |
| Tanning materials—                                       |                      |                 |                 |                 |                 |                 |
| Mangrove bark.....long tons.                             | 2                    | 97              | 3               | 88              | 7               | 316             |
| Quebracho, extract.....pounds.                           | 131,110              | 5,699           | 144,497         | 6,903           | 108,897         | 6,700           |
| Quebracho wood.....long tons.                            | 23                   | 357             | 4               | 54              | 56              | 850             |
| Sumac, ground or unground.....pounds.                    | 13,310               | 425             | 14,725          | 558             | 12,997          | 429             |
| Other.....do.  |                      | 438             |                 | 1,824           |                 | 3,016           |
| Total tanning materials.....                             |                      | 7,016           |                 | 9,427           |                 | 11,311          |
| Wood—  |                      |                 |                 |                 |                 |                 |
| Brier root or brierwood and Ivory or laurel root.....do. |                      | 831             |                 | 1,288           |                 | 1,006           |
| Chair cane or reed.....do.                               |                      | 255             |                 | 236             |                 | 1,286           |

1 Not stated.

2 Includes "Waste, refuse, etc.," prior to July 1, 1918.

3 July 1 to Dec. 31.



TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article imported.                    | Year ending Dec. 31— |         |           |         |           |         |
|--------------------------------------|----------------------|---------|-----------|---------|-----------|---------|
|                                      | 1918                 |         | 1919      |         | 1920      |         |
|                                      | Quantity.            | Value.  | Quantity. | Value.  | Quantity. | Value.  |
| VEGETABLE MATTER—continued.          |                      |         |           |         |           |         |
| Forest products—Continued.           |                      |         |           |         |           |         |
| Wood—Continued.                      |                      |         |           |         |           |         |
| Cabinet woods, unsawed—              |                      |         |           |         |           |         |
| Cedar.....M feet..                   | 9                    | \$877   | 9         | \$592   | 8         | \$730   |
| Mahogany.....do....                  | 44                   | 3,848   | 43        | 3,973   | 53        | 7,193   |
| Other.....do.....                    | ( <sup>1</sup> )     | 713     | 8         | 706     | 14        | 1,330   |
| Total cabinet woods.....do....       |                      | 5,238   |           | 5,271   | 75        | 9,253   |
| Logs and round timber.....do....     | 34                   | 567     | 93        | 1,691   | 76        | 2,000   |
| Lumber—                              |                      |         |           |         |           |         |
| Boards and other sawed lum-          |                      |         |           |         |           |         |
| ber.....M feet..                     | 1,209                | 34,315  | 1,149     | 37,261  | 1,351     | 57,724  |
| Laths.....M.....                     | 282                  | 966     | 803       | 3,037   | 442       | 4,173   |
| Shingles.....M.....                  | 1,798                | 5,627   | 1,987     | 8,720   | 1,964     | 11,280  |
| Other.....do.....                    |                      | 1,072   |           | 1,389   |           | 2,901   |
| Total lumber.....do.....             |                      | 41,980  |           | 50,407  |           | 76,058  |
| Pulp wood, peeled, rossed, and       |                      |         |           |         |           |         |
| rough.....cords..                    | 1,370                | 13,383  | 1,047     | 10,459  | 1,241     | 16,903  |
| Rattan and reeds.....do.....         |                      | 1,308   |           | 872     |           | 2,467   |
| Timber, ship and other.....do....    |                      | 1,257   |           | 297     |           | 563     |
| All other wood.....do.....           |                      | 928     |           | 667     |           | 1,576   |
| Total wood.....do.....               |                      | 64,727  |           | 71,138  |           | 111,172 |
| Wood pulp.....long tons..            | 516                  | 31,477  | 568       | 37,048  | 809       | 89,418  |
| Total forest products.....do....     |                      | 279,605 |           | 374,455 |           | 521,332 |
| Fruits:                              |                      |         |           |         |           |         |
| Fresh or dried—                      |                      |         |           |         |           |         |
| Bananas.....bunches..                | 32,249               | 15,438  | 35,993    | 15,935  | 39,330    | 19,088  |
| Currants.....pounds..                | 5,091                | 558     | 14,852    | 2,296   | 55,832    | 6,076   |
| Dates.....do.....                    | 10,721               | 481     | 36,921    | 1,891   | 32,347    | 2,088   |
| Figs.....do.....                     | 11,775               | 873     | 25,359    | 4,518   | 31,437    | 3,433   |
| Grapefruit.....do.....               |                      | 157     |           | 611     |           | 627     |
| Grapes.....cubic feet..              | 968                  | 983     | 535       | 845     | 962       | 1,485   |
| Lemons.....do.....                   |                      | 1,858   |           | 2,433   |           | 2,905   |
| Olives.....gallons..                 | 2,666                | 1,328   | 3,754     | 2,339   | 4,778     | 4,925   |
| Oranges.....do.....                  |                      | 117     |           | 53      |           | 58      |
| Pineapples.....do.....               |                      | 846     |           | 1,048   |           | 1,423   |
| Raisins.....pounds..                 | 100                  | 21      | 1,567     | 443     | 46,039    | 7,564   |
| Other.....do.....                    |                      | 1,844   |           | 4,609   |           | 4,136   |
| Total fresh or dried.....do....      |                      | 24,514  |           | 37,024  |           | 53,858  |
| Prepared or preserved.....do....     |                      | 542     |           | 1,291   |           | 2,706   |
| Total fruits.....do.....             |                      | 25,056  |           | 38,315  |           | 56,564  |
| Grain and grain products:            |                      |         |           |         |           |         |
| Grain—                               |                      |         |           |         |           |         |
| Corn.....bushels..                   | 1,990                | 1,976   | 11,218    | 10,967  | 7,784     | 9,297   |
| Oats.....do.....                     | 1,444                | 1,244   | 809       | 470     | 6,728     | 6,549   |
| Wheat.....do.....                    | 17,036               | 30,429  | 7,911     | 14,906  | 35,809    | 75,359  |
| Total grain.....do.....              | 20,470               | 33,649  | 19,733    | 26,343  | 50,321    | 91,205  |
| Grain products—                      |                      |         |           |         |           |         |
| Bread and biscuit.....pounds..       | ( <sup>1</sup> )     | 72      | 998       | 206     | 1,469     | 368     |
| Macaroni, vermicelli, etc.....do.... | 402                  | 41      | 903       | 102     | 805       | 107     |
| Meal and flour, wheat flour          |                      |         |           |         |           |         |
| .....barrels..                       | 187                  | 1,512   | 17        | 171     | 801       | 8,669   |
| Total grain products.....do....      |                      | 1,625   |           | 479     |           | 9,144   |
| Other.....do.....                    |                      | 4,191   |           | 6,534   |           | 4,982   |
| Total grain and grain products..     |                      | 39,465  |           | 33,356  |           | 105,331 |

<sup>1</sup> Not stated.<sup>2</sup> July 1 to Dec. 31.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article imported.                                   | Year ending Dec. 31— |                 |                 |                 |                 |                 |
|---|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|   | 1918                 |                 | 1919            |                 | 1920            |                 |
|   | Quantity.            | Value.          | Quantity.       | Value.          | Quantity.       | Value.          |
|   | Thou-<br>sands.      | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands. |
| VEGETABLE MATTER—Continued.                         |                      |                 |                 |                 |                 |                 |
| Hay.....long tons..                                 | 400                  | \$4,860         | 208             | \$3,082         | 209             | \$4,482         |
| Hops.....pounds..                                   | 77                   | 51              | 467             | 235             | 5,949           | 2,933           |
| Indigo, natural and synthetic..do..                 | 2,524                | 2,610           | 1,051           | 692             | 919             | 787             |
| Licorice root.....do..                              | 27,100               | 1,697           | 49,892          | 3,385           | 56,226          | 3,455           |
| Liquors, alcoholic.....do..                         |                      | 5,047           |                 | 525             |                 | 3,269           |
| Nursery stock, mainly flowering bulbs.....do..      |                      | 2,007           |                 | 4,421           |                 | 5,080           |
| Nuts:   |                      |                 |                 |                 |                 |                 |
| Almonds—  |                      |                 |                 |                 |                 |                 |
| Shelled.....pounds..                                | 21,545               | 5,732           | 28,008          | 10,582          | 18,151          | 6,733           |
| Unshelled.....do..                                  | 6,149                | 948             | 7,483           | 1,305           | 6,703           | 1,063           |
| Coconuts.....number..                               | (1)                  | 2,490           | 85,082          | 4,053           | 91,185          | 4,230           |
| Coconut meat—                                       |                      |                 |                 |                 |                 |                 |
| Not prepared.....pounds..                           | 430,649              | 26,263          | 258,916         | 16,545          | 215,188         | 14,187          |
| Prepared.....do..                                   | 20,270               | 2,607           | 29,638          | 4,141           | 32,921          | 5,167           |
| Cream and Brazil.....do..                           | 11,282               | 663             | 43,076          | 3,136           | 13,998          | 1,892           |
| Filberts—   |                      |                 |                 |                 |                 |                 |
| Shelled.....do..                                    | 4,246                | 892             | 3,779           | 1,194           | 5,034           | 1,326           |
| Unshelled.....do..                                  | 7,433                | 926             | 10,747          | 3,396           | 14,096          | 1,863           |
| Marrons, crude.....do..                             | 266                  | 23              | 5,012           | 394             | 29,480          | 1,716           |
| Palm and palm-nut kernels.....do..                  | 16,905               | 199             | 5,610           | 289             | 8,329           | 485             |
| Peanuts—  |                      |                 |                 |                 |                 |                 |
| Shelled.....do..                                    | 67,747               | 4,276           | 24,180          | 1,934           | 110,810         | 10,571          |
| Unshelled.....do..                                  | 1,971                | 129             | 5,667           | 394             | 8,703           | 772             |
| Walnuts—  |                      |                 |                 |                 |                 |                 |
| Shelled.....do..                                    | 9,707                | 3,786           | 10,261          | 5,317           | 15,818          | 6,032           |
| Unshelled.....do..                                  | 3,304                | 496             | 21,235          | 3,985           | 16,073          | 2,466           |
| Other.....do..                                      |                      | 552             |                 | 846             |                 | 1,196           |
| Total nuts.....                                     |                      | 49,932          |                 | 57,511          |                 | 59,659          |
| Oil cake.....pounds..                               | 37,780               | 1,765           | 112,406         | 2,371           | 223,853         | 4,415           |
| Oils, vegetable:                                    |                      |                 |                 |                 |                 |                 |
| Fixed or expressed—                                 |                      |                 |                 |                 |                 |                 |
| Chinese nut.....gallons..                           | 5,696                | 6,387           | 7,180           | 8,121           | 9,062           | 11,077          |
| Cocoa butter or butterine.....pounds..              | 3                    | 1               | 1               | 1               | 72              | 25              |
| Coconut oil.....do..                                | 356,089              | 44,290          | 281,063         | 35,380          | 216,327         | 33,080          |
| Cottonseed.....do..                                 | 18,373               | 2,215           | 27,806          | 3,673           | 9,458           | 1,305           |
| Linseed.....gallons..                               | 26                   | 37              | 2,152           | 3,040           | 4,693           | 6,489           |
| Olive, edible.....do..                              | 171                  | 451             | 9,024           | 18,014          | 4,079           | 12,169          |
| Olive, other.....do..                               | (2)                  | (2)             | 282             | 435             | 66              | 132             |
| Palm oil.....pounds..                               | 20,963               | 1,651           | 41,813          | 4,317           | 41,948          | 5,430           |
| Palm kernel.....do..                                | 34                   | 5               | 1,929           | 143             | 1,694           | 238             |
| Peanut.....gallons..                                | 9,129                | 8,531           | 20,540          | 22,010          | 12,683          | 16,990          |
| Rapeseed.....do..                                   | 3,077                | 3,096           | 1,117           | 1,306           | 1,721           | 1,922           |
| Soya bean.....pounds..                              | 335,984              | 38,456          | 195,808         | 24,019          | 112,214         | 13,721          |
| Other.....do..                                      |                      | 2,506           |                 | 2,658           |                 | 1,865           |
| Total, fixed or expressed.....                      |                      | 107,625         |                 | 123,017         |                 | 104,443         |
| Volatile or essential—                              |                      |                 |                 |                 |                 |                 |
| Birch and cajaput.....pounds..                      | (1)                  | 30              | 17              | 13              | 22              | 10              |
| Lemon.....do..                                      | 588                  | 436             | 607             | 612             | 751             | 1,063           |
| Other.....do..                                      |                      | 2,818           |                 | 6,358           |                 | 7,973           |
| Total, volatile or essential.....                   |                      | 3,284           |                 | 6,983           |                 | 9,046           |
| Total vegetable oils.....                           |                      | 110,909         |                 | 130,000         |                 | 113,489         |
| Opium, crude.....pounds..                           | 160                  | 2,676           | 730             | 8,280           | 211             | 1,312           |
| Rice, rice meal, etc.:                              |                      |                 |                 |                 |                 |                 |
| Rice—   |                      |                 |                 |                 |                 |                 |
| Cleaned.....pounds..                                | 424,692              | 17,907          | 144,090         | 9,905           | 111,694         | 11,475          |
| Uncleaned, including paddy.....do..                 | 57,376               | 3,023           | 29,495          | 2,250           | 29,536          | 2,435           |
| Rice flour, rice meal, and broken rice.....pounds.. | 75,980               | 2,558           | 1,010           | 87              | 1,721           | 126             |
| Total rice, etc.....do..                            | 558,048              | 23,488          | 174,595         | 12,242          | 142,951         | 14,036          |
| Sago, tapioca, etc.....do..                         | (1)                  | 3,903           | 99,275          | 5,208           | 104,843         | 5,929           |

1 Not stated.

2 July 1 to Dec. 31.

3 Less than 500.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article imported.                             | Year ending Dec. 31— |                  |              |                  |              |                |
|---|----------------------|------------------|--------------|------------------|--------------|----------------|
|   | 1918                 |                  | 1919         |                  | 1920         |                |
|   | Quantity.            | Value.           | Quantity.    | Value.           | Quantity.    | Value.         |
| <b>VEGETABLE MATTER—continued.</b>            |                      |                  |              |                  |              |                |
| <b>Seeds:</b>                                 | <i>Thou-</i>         | <i>Thou-</i>     | <i>Thou-</i> | <i>Thou-</i>     | <i>Thou-</i> | <i>Thou-</i>   |
| Castor bean..... bushels..                    | sands. 639           | sands. \$1,759   | sands. 1,209 | sands. \$3,674   | sands. 1,239 | sands. \$2,842 |
| Clover—                                       |                      |                  |              |                  |              |                |
| Red..... pounds..                             | 931                  | 178              | 7,026        | 2,410            | 12,693       | 4,627          |
| Other..... do.....                            | 8,589                | 1,908            | 18,016       | 4,992            | 12,794       | 2,908          |
| Flaxseed..... bushels..                       | 12,974               | 32,994           | 14,036       | 44,340           | 24,641       | 74,623         |
| Grass seed, n. e. s. .... pounds..            | 6,076                | 569              | 15,610       | 2,605            | 21,113       | 4,485          |
| Mustard..... do.....                          | 14,449               | 1,279            | 14,226       | 1,260            | 9,063        | 952            |
| Sugar beet..... do.....                       | 4,297                | 1,341            | 9,830        | 2,137            | 23,446       | 5,213          |
| Other..... do.....                            |                      | 6,168            |              | 7,757            |              | 6,816          |
| Total seeds..... do.....                      |                      | 45,194           |              | 69,195           |              | 102,466        |
| <b>Spices:</b>                                |                      |                  |              |                  |              |                |
| Unground—                                     |                      |                  |              |                  |              |                |
| Capsicum..... pounds..                        | 11,788               | 1,200            | 1,161        | 154              | 3,680        | 559            |
| Cassia..... do.....                           | 12,671               | 1,145            | 8,710        | 878              | 6,750        | 707            |
| Cloves..... do.....                           | 11,634               | 1,552            | 6,150        | 1,523            | 6,250        | 2,257          |
| Ginger root, not preserved. do.....           | 5,691                | 612              | 4,374        | 521              | 8,125        | 1,146          |
| Nutmegs..... do.....                          | 12,225               | 1,396            | 4,099        | 754              | 4,218        | 816            |
| Pepper, black or white. do.....               | 48,869               | 8,043            | 22,826       | 3,703            | 13,823       | 2,418          |
| Total unground..... do.....                   | 72,778               | 10,848           | 47,320       | 7,533            | 42,831       | 7,903          |
| Ground—                                       |                      |                  |              |                  |              |                |
| Capsicum..... do.....                         | 11,444               | 1,415            | 1,561        | 501              | 2,934        | 1,178          |
| Mustard..... do.....                          | 1,480                | 1,210            | 1,500        | 797              | 1,593        | 790            |
| Total ground..... do.....                     | 1,904                | 625              | 3,061        | 1,298            | 4,527        | 1,968          |
| Other spices..... do.....                     | 16,168               | 2,625            | 6,060        | 972              | 13,560       | 1,771          |
| Total spices..... do.....                     | 90,850               | 14,098           | 56,441       | 9,803            | 60,918       | 11,642         |
| <b>Starch..... do.....</b>                    | 26,431               | 2,108            | 2,612        | 243              | 19,139       | 1,017          |
| <b>Sugar and molasses:</b>                    |                      |                  |              |                  |              |                |
| Molasses..... gallons..                       | 141,339              | 10,424           | 120,156      | 4,177            | 160,208      | 5,119          |
| Sugar—  |                      |                  |              |                  |              |                |
| Beet..... pounds..                            | ( <sup>2</sup> )     | ( <sup>2</sup> ) | 1            | ( <sup>2</sup> ) | 36,754       | 6,402          |
| Cane..... do.....                             | 5,166,841            | 241,390          | 7,019,690    | 393,171          | 8,028,668    | 1,008,788      |
| Maple sugar and sirup. do.....                | 4,135                | 875              | 3,928        | 1,110            | 8,338        | 1,975          |
| Total sugar..... do.....                      | 5,170,976            | 242,265          | 7,023,619    | 394,281          | 8,073,760    | 1,017,163      |
| Total sugar and molasses..... do.....         |                      | 252,689          |              | 398,458          |              | 1,022,282      |
| <b>Tea..... pounds..</b>                      | 134,418              | 29,540           | 80,963       | 20,149           | 90,247       | 24,392         |
| <b>Tobacco:</b>                               |                      |                  |              |                  |              |                |
| Wrapper..... do.....                          | 14,776               | 12,406           | 7,775        | 10,158           | 11,768       | 18,272         |
| Filler..... do.....                           | 76,201               | 41,674           | 78,210       | 64,987           | 70,454       | 63,358         |
| Total tobacco..... do.....                    | 90,977               | 54,080           | 85,985       | 75,145           | 82,222       | 81,630         |
| <b>Vanilla beans..... do.....</b>             | 759                  | 1,196            | 1,150        | 2,407            | 1,240        | 2,406          |
| <b>Vegetables:</b>                            |                      |                  |              |                  |              |                |
| Fresh and dried—                              |                      |                  |              |                  |              |                |
| Beans..... bushels..                          | 4,210                | 18,416           | 4,972        | 17,527           | 2,095        | 7,510          |
| Garlic..... pounds..                          | 12,241               | 1,147            | 9,901        | 1,335            | 7,705        | 872            |
| Onions..... bushels..                         | 261                  | 312              | 741          | 1,018            | 1,819        | 2,364          |
| Peas, dried..... do.....                      | 2,243                | 8,896            | 2,141        | 7,459            | 1,803        | 7,643          |
| Potatoes—                                     |                      |                  |              |                  |              |                |
| Irish..... do.....                            | 1,201                | 1,369            | 5,544        | 5,907            | 6,062        | 12,527         |
| Sweet and desiccated or prepared..... do..... |                      | 5                |              | 480              |              | 348            |
| Other..... do.....                            |                      | 2,026            |              | 2,157            |              | 2,720          |
| Total fresh and dried..... do.....            |                      | 31,071           |              | 35,913           |              | 33,934         |

1 July 1 to Dec. 31.

<sup>2</sup>Less than 500.

TABLE 384.—Agricultural imports of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article imported.  | Year ending Dec. 31— |           |           |           |           |           |
|--|----------------------|-----------|-----------|-----------|-----------|-----------|
|  | 1918                 |           | 1919      |           | 1920      |           |
|  | Quantity.            | Value.    | Quantity. | Value.    | Quantity. | Value.    |
| VEGETABLE MATTER—continued.                                |                      |           |           |           |           |           |
| Vegetables—Continued.                                      | Thou-                | Thou-     | Thou-     | Thou-     | Thou-     | Thou-     |
| Prepared or preserved—                                     | sands.               | sands.    | sands.    | sands.    | sands.    | sands.    |
| Mushrooms.....pounds..                                     | 1,289                | \$527     | 2,093     | \$1,856   | 3,220     | \$1,565   |
| Pickles and sauces.....                                    | 337                  | 1,195     | 1,195     | 1,554     | 1,554     | 1,554     |
| Other.....   | 754                  | 2,182     | 2,182     | 3,319     | 3,319     | 3,319     |
| Total prepared or preserved.....                           |                      | 1,618     |           | 4,733     |           | 6,438     |
| Total vegetables.....                                      |                      | 32,689    |           | 40,646    |           | 40,422    |
| Vinegar.....gallons..                                      | 53                   | 30        | 99        | 59        | 193       | 90        |
| Wax, vegetable.....pounds..                                | 9,878                | 3,682     | 10,814    | 3,810     | 6,554     | 2,168     |
| Total vegetable matter, including forest products.....     |                      | 1,287,270 |           | 1,772,033 |           | 2,722,180 |
| Total vegetable matter, excluding forest products.....     |                      | 1,007,665 |           | 1,397,578 |           | 2,200,848 |
| Total agricultural imports, including forest products..... |                      | 1,950,801 |           | 2,767,336 |           | 3,532,700 |
| Total agricultural imports, excluding forest products..... |                      | 1,671,196 |           | 2,392,880 |           | 3,011,368 |

TABLE 385.—Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920.

[The figures are in round thousands, i. e., 000 omitted.]

| Article exported.                                | Year ending Dec. 31— |         |           |         |           |          |
|--|----------------------|---------|-----------|---------|-----------|----------|
|  | 1918                 |         | 1919      |         | 1920      |          |
|  | Quantity.            | Value.  | Quantity. | Value.  | Quantity. | Value.   |
| ANIMAL MATTER.                                   |                      |         |           |         |           |          |
| Animals, live:                                   | Thou-                | Thou-   | Thou-     | Thou-   | Thou-     | Thou-    |
| Cattle.....number..                              | sands.               | sands.  | sands.    | sands.  | sands.    | sands.   |
| Horses.....do.....                               | 17                   | \$1,093 | 70        | \$3,440 | 85        | \$10,753 |
| Mules.....do.....                                | 51                   | 9,858   | 20        | 2,356   | 14        | 2,716    |
| Sheep.....do.....                                | 17                   | 3,361   | 7         | 1,199   | 9         | 1,866    |
| Swine.....do.....                                | 8                    | 121     | 35        | 3,370   | 49        | 572      |
| Other (including fowls).....do.....              | 10                   | 334     | 25        | 684     | 55        | 1,724    |
| Total live animals.....                          |                      | 289     |           | 463     |           | 702      |
| Total live animals.....                          |                      | 15,046  |           | 12,004  |           | 18,333   |
| Beeswax.....pounds..                             | 165                  | 63      | 210       | 92      | 633       | 205      |
| Dairy products:                                  |                      |         |           |         |           |          |
| Butter.....do.....                               | 26,194               | 10,809  | 34,556    | 17,504  | 17,458    | 10,142   |
| Cheese.....do.....                               | 48,405               | 11,735  | 14,160    | 5,350   | 16,262    | 5,054    |
| Milk—  |                      |         |           |         |           |          |
| Condensed, evaporated, and powdered.....pounds.. | 551,140              | 72,825  | 852,865   | 121,893 | 414,250   | 65,239   |
| Other, including cream.....                      |                      | 529     |           | 1,730   |           | 382      |
| Total dairy products.....                        |                      | 95,958  |           | 146,477 |           | 80,817   |
| Eggs.....dozen..                                 | 20,938               | 8,428   | 38,789    | 18,812  | 26,842    | 13,569   |
| Egg yolks, canned eggs, etc.....                 |                      | 718     |           | 132     |           | 310      |
| Feathers.....                                    |                      | 253     |           | 863     |           | 679      |
| Fibers, animal, wool.....pounds..                | 407                  | 463     | 2,840     | 2,231   | 8,845     | 4,937    |
| Glue.....do.....                                 | 5,810                | 1,111   | 8,486     | 1,481   | 13,565    | 2,415    |
| Honey.....do.....                                | 11,599               | 2,223   | 9,076     | 1,955   | 1,540     | 265      |

TABLE 385.—Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article exported.                    | Year ending Dec. 31— |               |               |               |               |               |
|--------------------------------------|----------------------|---------------|---------------|---------------|---------------|---------------|
|                                      | 1918                 |               | 1919          |               | 1920          |               |
|                                      | Quantity.            | Value.        | Quantity.     | Value.        | Quantity.     | Value.        |
| <b>ANIMAL MATTER—continued.</b>      |                      |               |               |               |               |               |
| <b>Packing-house products:</b>       | <i>Thou-</i>         | <i>Thou-</i>  | <i>Thou-</i>  | <i>Thou-</i>  | <i>Thou-</i>  |               |
| <b>Beef—</b>                         | <i>sands.</i>        | <i>sands.</i> | <i>sands.</i> | <i>sands.</i> | <i>sands.</i> | <i>sands.</i> |
| Canned.....pounds..                  | 141,457              | \$51,498      | 53,887        | \$20,673      | 23,766        | \$5,790       |
| Cured or pickled.....do.             | 44,206               | 7,921         | 42,805        | 8,739         | 25,771        | 3,660         |
| Fresh.....do.                        | 514,342              | 109,605       | 174,427       | 40,281        | 89,649        | 17,565        |
| Oils, oleo oil.....do.               | 69,106               | 15,493        | 75,585        | 22,025        | 74,388        | 16,585        |
| Oleomargarine.....do.                | 8,909                | 2,399         | 22,940        | 6,577         | 16,558        | 4,567         |
| Stearin.....do.                      | 10,550               | 2,291         | 20,355        | 4,171         | 17,513        | 3,488         |
| Tallow.....do.                       | 4,223                | 746           | 38,954        | 6,370         | 20,692        | 2,951         |
| Total beef.....do.                   | 792,798              | 189,953       | 429,433       | 108,836       | 268,317       | 54,606        |
| Bones, hoofs, and horns.....         |                      | 308           |               | 371           |               | 270           |
| Grease, and soap stock—              |                      |               |               |               |               |               |
| Lubricating.....                     |                      | 3,003         |               | 6,040         |               | 7,372         |
| Soap stock.....                      |                      | 2,730         |               | 6,656         |               | 6,698         |
| Hair.....                            |                      | 681           |               | 1,551         |               | 1,328         |
| Hides and skins other than furs—     |                      |               |               |               |               |               |
| Calfskins.....pounds..               | 2,213                | 867           | 4,654         | 3,218         | 1,140         | 690           |
| Cattle.....do.                       | 2,338                | 682           | 16,996        | 6,290         | 11,455        | 3,761         |
| Horse.....do.                        | 54                   | 14            | 467           | 135           | 655           | 143           |
| Other.....do.                        | 499                  | 215           | 2,806         | 1,252         | 4,122         | 1,619         |
| Total.....do.                        | 5,104                | 1,778         | 24,923        | 10,895        | 17,402        | 6,208         |
| Lard compounds.....do.               | 43,977               | 10,259        | 124,963       | 31,606        | 32,051        | 7,219         |
| Meat, canned, n. e. s.....           |                      | 8,820         |               | 12,951        |               | 6,480         |
| Mutton.....pounds..                  | 1,631                | 387           | 3,009         | 633           | 3,575         | 759           |
| Oils, animal, n. e. s.....gallons..  | 795                  | 882           | 1,950         | 2,955         | 517           | 774           |
| <b>Pork—</b>                         |                      |               |               |               |               |               |
| Canned.....pounds..                  | 5,267                | 1,776         | 5,792         | 2,422         | 1,802         | 752           |
| Cured—                               |                      |               |               |               |               |               |
| Bacon.....do.                        | 1,104,788            | 315,968       | 1,190,297     | 373,913       | 636,676       | 156,297       |
| Hams and shoulders.....do.           | 537,213              | 145,675       | 596,799       | 189,429       | 185,247       | 50,888        |
| Salted or pickled.....do.            | 36,672               | 8,535         | 34,114        | 8,633         | 38,709        | 7,670         |
| Total cured.....do.                  | 1,678,673            | 470,178       | 1,821,207     | 571,975       | 860,632       | 214,855       |
| Fresh.....do.                        | 11,633               | 2,908         | 26,777        | 8,348         | 38,305        | 9,090         |
| Lard.....do.                         | 548,818              | 144,933       | 760,902       | 237,953       | 612,250       | 143,371       |
| Lard, neutral.....do.                | 6,307                | 1,613         | 22,957        | 7,726         | 26,238        | 5,906         |
| Oils, lard oil <sup>1</sup> .....do. | 335                  | 75            | 1,087         | 220           | 667           | 128           |
| Total pork.....do.                   | 2,251,033            | 621,483       | 2,688,721     | 828,674       | 1,536,894     | 374,002       |
| Sausage—                             |                      |               |               |               |               |               |
| Canned.....pounds..                  | 6,350                | 1,817         | 8,198         | 2,762         | 7,158         | 2,345         |
| Other.....do.                        | 6,029                | 2,125         | 13,889        | 5,912         | 10,509        | 4,188         |
| Sausage casings.....do.              | 4,037                | 2,612         | 25,477        | 6,810         | 25,238        | 5,861         |
| All other.....do.                    |                      | 6,944         |               | 11,643        |               | 7,170         |
| Total packing-house products.....    |                      | 853,752       |               | 1,038,295     |               | 485,275       |
| <b>Poultry and game.....</b>         |                      | 935           |               | 4,560         |               | 757           |
| Total animal matter.....             |                      | 978,960       |               | 1,226,901     |               | 607,648       |
| <b>VEGETABLE MATTER.</b>             |                      |               |               |               |               |               |
| Broom corn.....long tons..           | 4                    | 1,396         | 4             | 900           | 4             | 777           |
| Cocoa and chocolate.....             |                      | 6,961         |               | 21,381        |               | 9,048         |
| Coffee:                              |                      |               |               |               |               |               |
| Green.....pounds..                   | 43,032               | 6,365         | 28,239        | 7,296         | 34,786        | 9,224         |
| Roasted.....do.                      | 1,605                | 297           | 6,062         | 1,521         | 1,972         | 580           |
| Total coffee.....do.                 | 44,727               | 6,662         | 34,351        | 8,817         | 36,758        | 9,804         |

<sup>1</sup> One gallon is estimated to weigh 7.5 pounds.

TABLE 385.—Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article exported                         | Year ending Dec. 31— |              |              |                |                  |              |
|--|----------------------|--------------|--------------|----------------|------------------|--------------|
|  | 1918                 |              | 1919         |                | 1920             |              |
|  | Quantity.            | Value.       | Quantity.    | Value.         | Quantity.        | Value.       |
| <b>VEGETABLE MATTER—continued.</b>       |                      |              |              |                |                  |              |
| Cotton:                                  | <i>Thou-</i>         | <i>Thou-</i> | <i>Thou-</i> | <i>Thou-</i>   | <i>Thou-</i>     | <i>Thou-</i> |
| Sea Island.....pounds..                  | sands. 1,057         | sands. \$856 | sands. 2,492 | sands. \$1,543 | sands. 975       | sands. \$919 |
| Upland.....do.....                       | 2,047,096            | 664,386      | 3,352,494    | 1,134,817      | 3,154,296        | 1,133,871    |
| Linters.....do.....                      | 70,022               | 8,881        | 12,992       | 1,011          | 24,043           | 1,619        |
| Total cotton.....do.....                 | 2,118,175            | 674,123      | 3,367,678    | 1,137,371      | 3,179,314        | 1,136,409    |
| Flavoring extracts and fruit juices..... |                      | 967          |              | 1,342          |                  | 1,428        |
| Flowers, cut.....                        |                      | 174          |              | 171            |                  | 181          |
| Forest products:                         |                      |              |              |                |                  |              |
| Barks, and extracts of, for tanning—     |                      |              |              |                |                  |              |
| Bark.....long tons..                     | 1                    | 19           | 1            | 48             | ( <sup>1</sup> ) | 18           |
| Bark, extracts of.....                   |                      | 3,126        |              | 5,598          |                  | 3,678        |
| Total bark, etc.....                     |                      | 3,145        |              | 5,646          |                  | 3,696        |
| Logwood extracts.....                    |                      | 1,551        |              | 1,356          |                  | 2,605        |
| Moss.....                                |                      | 92           |              | 91             |                  | 115          |
| Naval stores—                            |                      |              |              |                |                  |              |
| Rosin.....barrels..                      | 779                  | 7,551        | 1,210        | 20,434         | 1,164            | 19,469       |
| Tar, turpentine, and pitch.....do.....   | 54                   | 408          | 67           | 552            | 81               | 448          |
| Turpentine, spirits of.....gallons..     | 3,717                | 2,277        | 10,672       | 10,448         | 9,458            | 14,588       |
| Total naval stores.....                  |                      | 10,236       |              | 31,434         |                  | 34,503       |
| Wood—                                    |                      |              |              |                |                  |              |
| Logs and round timber—                   |                      |              |              |                |                  |              |
| Pine, yellow.....M feet..                | 8                    | 129          | 5            | 115            | 15               | 455          |
| Other logs.....do.....                   | 6                    | 188          | 8            | 137            | 10               | 307          |
| Hardwood.....do.....                     | 1                    | 60           | 7            | 251            | 8                | 640          |
| Softwood.....do.....                     | 8                    | 154          | 13           | 461            | 50               | 1,583        |
| Total.....do.....                        | 23                   | 531          | 38           | 964            | 83               | 2,985        |
| Lumber—                                  |                      |              |              |                |                  |              |
| Boards, deals, and planks—               |                      |              |              |                |                  |              |
| Cypress.....M feet..                     | 20                   | 1,216        | 15           | 925            | 11               | 908          |
| Pine, yellow.....do.....                 | 272                  | 8,986        | 301          | 9,722          | 451              | 17,041       |
| Gum.....do.....                          | 28                   | 1,299        | 72           | 4,034          | 27               | 2,748        |
| Oak.....do.....                          | 65                   | 3,710        | 158          | 11,747         | 105              | 12,459       |
| Pine, white.....do.....                  | 21                   | 1,219        | 24           | 1,353          | 39               | 2,093        |
| Pine, yellow.....do.....                 | 300                  | 9,360        | 438          | 17,734         | 637              | 37,695       |
| Short-leaf.....do.....                   | 12                   | 398          | 20           | 829            | 16               | 888          |
| Other.....do.....                        | 93                   | 3,034        | 70           | 2,573          | 105              | 5,276        |
| Poplar.....do.....                       | 23                   | 1,556        | 36           | 2,695          | 19               | 2,314        |
| Redwood.....do.....                      | 36                   | 1,255        | 34           | 1,418          | 45               | 3,169        |
| Spruce.....do.....                       | 71                   | 7,944        | 22           | 1,919          | 22               | 1,781        |
| Other—                                   |                      |              |              |                |                  |              |
| Hardwood.....do.....                     | 68                   | 8,377        | 102          | 9,113          | 60               | 7,906        |
| Softwood.....do.....                     | 15                   | 823          | 19           | 798            | 14               | 913          |
| Total.....do.....                        | 1,024                | 49,177       | 1,311        | 64,860         | 1,551            | 96,381       |
| Railroad ties.....number..               | 2,682                | 2,303        | 4,700        | 4,179          | 4,246            | 5,566        |
| Shingles.....M.....                      | 20                   | 96           | 16           | 89             | 34               | 197          |
| Shooks—                                  |                      |              |              |                |                  |              |
| Box.....                                 |                      | 2,738        |              | 2,821          |                  | 4,249        |
| Cooperage.....number..                   | 1,542                | 4,428        | 2,857        | 8,489          | 1,747            | 6,916        |
| Other.....do.....                        | 363                  | 758          | 480          | 546            | 180              | 159          |
| Total shooks.....                        |                      | 7,924        |              | 11,856         |                  | 11,324       |
| Staves and heading—                      |                      |              |              |                |                  |              |
| Heading.....                             |                      | 564          |              | 591            |                  | 1,028        |
| Staves.....number..                      | 53,374               | 3,605        | 81,658       | 13,160         | 82,584           | 15,408       |
| Total staves and heading.....            |                      | 4,169        |              | 13,751         |                  | 16,436       |
| Other.....                               |                      | 2,348        |              | 3,790          |                  | 5,093        |
| Total lumber.....                        |                      | 66,022       |              | 98,525         |                  | 134,997      |

<sup>1</sup> Less than 500.

TABLE 385.—Agricultural exports (domestic) of the United States during the 3 years ending Dec. 31, 1920—Continued.

| Article exported.                              | Year ending Dec. 31— |         |           |         |           |         |
|--|----------------------|---------|-----------|---------|-----------|---------|
|  | 1918                 |         | 1919      |         | 1920      |         |
|  | Quantity.            | Value.  | Quantity. | Value.  | Quantity. | Value.  |
| <b>VEGETABLE MATTER—continued.</b>             |                      |         |           |         |           |         |
| <b>Forest products—Continued.</b>              |                      |         |           |         |           |         |
| Timber—  | Thou-                | Thou-   | Thou-     | Thou-   | Thou-     | Thou-   |
| Hewn—  | sands.               | sands.  | sands.    | sands.  | sands.    | sands.  |
| Hardwood..... M feet.                          | 2                    | \$83    | 4         | \$269   | 3         | \$212   |
| Softwood..... do.                              | 5                    | 121     | 5         | 146     | 7         | 228     |
| Sawn—  |                      |         |           |         |           |         |
| Pitch pine..... do.                            | 36                   | 1,274   | 154       | 6,980   | 135       | 6,862   |
| Other—   |                      |         |           |         |           |         |
| Hardwood..... do.                              | 6                    | 276     | 5         | 330     | 4         | 232     |
| Softwood..... do.                              | 28                   | 745     | 15        | 439     | 22        | 757     |
| Total timber..... do.                          | 77                   | 2,459   | 183       | 8,144   | 171       | 8,341   |
| All other, including firewood..... do.         |                      | 176     |           | 365     |           | 413     |
| Total wood.....                                |                      | 69,228  |           | 107,998 |           | 146,736 |
| Wood alcohol..... gallons.                     | 2,624                | 2,036   | 718       | 750     | 703       | 1,244   |
| Wood pulp..... long tons.                      | 20                   | 1,734   | 36        | 3,048   | 29        | 2,947   |
| Total forest products.....                     |                      | 88,022  |           | 150,324 |           | 191,848 |
| <b>Fruits:</b>                                 |                      |         |           |         |           |         |
| Fresh or dried—                                |                      |         |           |         |           |         |
| Apples, dried..... pounds.                     | 2,200                | 311     | 24,704    | 4,110   | 8,828     | 1,509   |
| Apples, fresh..... barrels.                    | 580                  | 3,135   | 1,712     | 14,471  | 1,798     | 14,089  |
| Apricots, dried..... pounds.                   | 5,262                | 755     | 37,144    | 8,505   | 9,881     | 2,582   |
| Berries.....                                   |                      | 888     |           | 1,182   |           | 792     |
| Lemons..... boxes.                             | 193                  | 1,089   | 307       | 1,372   | 293       | 1,188   |
| Oranges..... do.                               | 887                  | 4,279   | 1,777     | 7,638   | 1,518     | 7,519   |
| Peaches, dried..... pounds.                    | 4,840                | 544     | 9,022     | 1,560   | 7,925     | 1,466   |
| Pears, fresh.....                              |                      | 929     |           | 1,765   |           | 2,202   |
| Prunes..... pounds.                            | 22,888               | 2,178   | 108,208   | 15,722  | 75,139    | 11,738  |
| Raisins..... do.                               | 52,658               | 4,668   | 110,183   | 13,089  | 58,312    | 9,505   |
| Other—   |                      |         |           |         |           |         |
| Dried.....                                     |                      | 753     |           | 2,557   |           | 2,168   |
| Fresh.....                                     |                      | 3,397   |           | 4,713   |           | 4,188   |
| Waste, cannery (pulp, cores, etc)..... pounds. |                      |         |           |         | 1,248     | 77      |
| Total, fresh or dried.....                     |                      | 22,926  |           | 76,684  |           | 59,023  |
| Preserved—                                     |                      |         |           |         |           |         |
| Canned—  |                      |         |           |         |           |         |
| Peaches.....                                   |                      | 1,179   |           | 9,490   |           | 6,342   |
| Other.....                                     |                      | 4,134   |           | 31,988  |           | 15,172  |
| Other preserved.....                           |                      | 1,990   |           | 4,518   |           | 1,882   |
| Total preserved.....                           |                      | 7,303   |           | 45,994  |           | 23,396  |
| Total fruits.....                              |                      | 30,229  |           | 122,678 |           | 82,419  |
| Ginseng..... pounds.                           | 227                  | 1,373   | 308       | 3,339   | 160       | 1,875   |
| Glucose and grape sugar:                       |                      |         |           |         |           |         |
| Glucose..... pounds.                           | 42,740               | 2,553   | 220,381   | 13,169  | 144,760   | 8,994   |
| Grape sugar..... do.                           | 14,592               | 906     | 35,237    | 1,971   | 17,736    | 1,074   |
| <b>Grain and grain products:</b>               |                      |         |           |         |           |         |
| Grain—   |                      |         |           |         |           |         |
| Barley..... bushels.                           | 18,805               | 30,565  | 37,612    | 53,832  | 17,854    | 27,165  |
| Buckwheat..... do.                             | 1                    | 3       | 186       | 307     | 300       | 543     |
| Corn..... do.                                  | 39,899               | 69,269  | 11,193    | 18,624  | 17,761    | 26,454  |
| Oats..... do.                                  | 114,463              | 98,222  | 55,294    | 46,435  | 12,878    | 12,338  |
| Rye..... do.                                   | 7,632                | 15,616  | 32,898    | 61,786  | 57,070    | 122,240 |
| Wheat..... do.                                 | 111,177              | 260,613 | 148,088   | 356,898 | 218,287   | 596,975 |
| Total grain..... do.                           | 291,977              | 474,288 | 285,269   | 537,882 | 324,150   | 785,715 |
| Grain products—                                |                      |         |           |         |           |         |
| Bran and middlings..... long tons.             | 7                    | 327     | 5         | 233     | 3         | 163     |
| Bread and biscuit..... pounds.                 | 8,586                | 1,378   | 12,827    | 2,506   | 18,755    | 3,732   |
| Cereal preparations, for table food.....       |                      | 6,354   |           | 8,819   |           | 7,189   |
| Distillers' and brewers' grains.....           |                      |         |           |         |           |         |
| Malt..... long tons.                           | (1)                  | 13      | 2         |         | (1)       | 24      |
| Malt..... bushels.                             | 896                  | 1,695   | 10,046    | 16,695  | 4,251     | 7,595   |

TABLE 385.—Agricultural exports (domestic) of the United States during 3 years ending Dec. 31, 1920—Continued.

| Article exported.                     | Year ending Dec. 31— |                  |                 |                 |                  |                  |
|---------------------------------------|----------------------|------------------|-----------------|-----------------|------------------|------------------|
|                                       | 1918                 |                  | 1919            |                 | 1920             |                  |
|                                       | Quantity.            | Value.           | Quantity.       | Value.          | Quantity.        | Value.           |
| VEGETABLE MATTER—continued.           |                      |                  |                 |                 |                  |                  |
| Grain and grain products—Continued.   |                      |                  |                 |                 |                  |                  |
| Grain products—Continued.             |                      |                  |                 |                 |                  |                  |
| Meal and flour—                       | Thou-<br>sands.      | Thou-<br>sands.  | Thou-<br>sands. | Thou-<br>sands. | Thou-<br>sands.  | Thou-<br>sands.  |
| Barley flour.....barrels..            | 1,360                | 13,878           | 256             | 2,572           | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Cornmeal.....do.....                  | 1,790                | 18,761           | 1,202           | 10,920          | 867              | \$7,478          |
| Oatmeal.....pounds..                  | 299,198              | 17,353           | 220,967         | 11,999          | 65,921           | 3,891            |
| Rye flour.....barrels..               | 1,446                | 15,450           | 1,266           | 12,425          | 364              | 3,638            |
| Wheat flour.....do.....               | 21,707               | 244,653          | 26,450          | 293,453         | 19,854           | 224,472          |
| Total meal and flour.....             |                      | 300,095          |                 | 331,369         |                  | 239,479          |
| Mill feed.....long tons..             | 10                   | 466              | 12              | 784             | 10               | 580              |
| Total grain products.....             |                      | 310,728          |                 | 360,532         |                  | 258,762          |
| All other.....                        |                      | 5,751            |                 | 3,804           |                  | 4,754            |
| Total grain and grain products.....   |                      | 790,767          |                 | 902,218         |                  | 1,049,231        |
| Hay.....long tons..                   | 28                   | 904              | 32              | 963             | 63               | 1,797            |
| Hops.....pounds..                     | 3,670                | 871              | 20,798          | 8,832           | 25,624           | 17,088           |
| Liquors, alcoholic.....               |                      | 9,801            |                 | 19,450          |                  | 24,471           |
| Nursery stock.....                    |                      | 240              |                 | 405             |                  | 405              |
| Nuts:                                 |                      |                  |                 |                 |                  |                  |
| Peanuts.....pounds..                  | 12,319               | 1,603            | 19,778          | 2,123           | 9,366            | 1,115            |
| Other.....                            |                      | 542              |                 | 1,462           |                  | 887              |
| Total nuts.....                       |                      | 2,145            |                 | 3,585           |                  | 1,972            |
| Oil cake and oil-cake meal:           |                      |                  |                 |                 |                  |                  |
| Corn.....pounds..                     | 69                   | 3                | 964             | 27              | 131              | 4                |
| Cottonseed—                           |                      |                  |                 |                 |                  |                  |
| Cake.....do.....                      | 1,384                | 32               | 394,626         | 12,919          | 314,018          | 8,818            |
| Meal.....do.....                      | 10,283               | 256              | 233,507         | 7,262           | 26,028           | 731              |
| Flaxseed or linseed—                  |                      |                  |                 |                 |                  |                  |
| Cake.....do.....                      | 45,896               | 1,115            | 327,923         | 11,657          | 223,286          | 7,639            |
| Meal.....do.....                      | 40,662               | 1,134            | 25,829          | 846             | 12,339           | 404              |
| Other.....do.....                     | 9,372                | 245              | 104,379         | 3,330           | 13,761           | 416              |
| Total oil cake and meal.....do.....   | 107,063              | 2,785            | 1,087,228       | 36,041          | 589,563          | 18,012           |
| Oils, vegetable:                      |                      |                  |                 |                 |                  |                  |
| Fixed or expressed—                   |                      |                  |                 |                 |                  |                  |
| Cocoa butter.....pounds..             | ( <sup>1</sup> )     | ( <sup>1</sup> ) | { 17,320        | { 13,032        | { 5,377          | { 1,949          |
| Coconut.....do.....                   |                      |                  | { 1118,612      | { 124,601       | { 25,695         | { 4,908          |
| Corn.....do.....                      | 171                  | 37               | 6,415           | 1,551           | 12,059           | 2,415            |
| Cottonseed.....do.....                | 119,087              | 23,184           | 193,133         | 40,890          | 194,754          | 34,875           |
| Linseed.....gallons..                 | 774                  | 1,162            | 1,502           | 2,607           | 715              | 1,240            |
| Peanut.....pounds..                   | ( <sup>1</sup> )     | ( <sup>1</sup> ) | { 14,342        | { 11,043        | { 1,425          | { 291            |
| Soya bean.....do.....                 |                      |                  | { 27,715        | { 16,098        | { 43,512         | { 9,412          |
| Other.....                            |                      | 4,088            |                 | 18,507          |                  | 1,886            |
| Total, fixed or expressed.....        |                      | 28,471           |                 | 98,329          |                  | 56,976           |
| Volatile or essential—                |                      |                  |                 |                 |                  |                  |
| Peppermint.....pounds..               | 60                   | 203              | 98              | 654             | 62               | 457              |
| Other.....                            |                      | 745              |                 | 1,367           |                  | 1,571            |
| Total volatile or essential.....      |                      | 948              |                 | 2,021           |                  | 2,028            |
| Total vegetable oils.....             |                      | 29,419           |                 | 100,350         |                  | 59,004           |
| Rice.....pounds..                     | 167,933              | 12,425           | 376,876         | 34,776          | 392,613          | 37,469           |
| Roots, herbs, and barks, n. e. s..... |                      | 728              |                 | 1,632           |                  | 1,466            |

<sup>1</sup> July 1 to Dec. 31.<sup>2</sup> Less than 500.<sup>3</sup> Not separately stated.



TABLE 385.—*Agricultural exports (domestic) of the United States during 3 years ending Dec. 31, 1920—Continued.*

| Article exported.  | Year ending Dec. 31— |              |              |              |              |              |
|--|----------------------|--------------|--------------|--------------|--------------|--------------|
|  | 1918                 |              | 1919         |              | 1920         |              |
|  | Quantity.            | Value.       | Quantity.    | Value.       | Quantity.    | Value.       |
| VEGETABLE MATTER—continued.                                |                      |              |              |              |              |              |
| Seeds:   | <i>Thou-</i>         | <i>Thou-</i> | <i>Thou-</i> | <i>Thou-</i> | <i>Thou-</i> | <i>Thou-</i> |
| Cotton.....pounds..  | sands. 1,741         | sands. \$70  | sands. 1,919 | sands. \$89  | sands. 5,270 | sands. \$309 |
| Flaxseed or linseed.....bushels..                          | 26                   | 135          | 17           | 125          | 16           | 112          |
| Grass and clover seed—                                     |                      |              |              |              |              |              |
| Clover.....pounds..  | 5,986                | 1,836        | 7,944        | 3,206        | 4,986        | 1,928        |
| Timothy.....do..   | 8,564                | 881          | 13,346       | 1,633        | 13,522       | 1,666        |
| Other.....do..   | 2,952                | 543          | 4,440        | 717          | 4,252        | 813          |
| Total grass and clover seed.....do....                     | 17,502               | 3,260        | 25,730       | 5,556        | 22,760       | 4,407        |
| All other seeds.....                                       |                      | 2,032        |              | 2,772        |              | 2,187        |
| Total seeds.....   |                      | 5,497        |              | 8,542        |              | 7,015        |
| Spices.....  |                      | 481          |              | 538          |              | 516          |
| Starch:  |                      |              |              |              |              |              |
| Corn starch.....pounds..                                   | 33,630               | 1,759        | 179,437      | 10,220       | 116,463      | 6,892        |
| Other.....do..   | 16,083               | 1,020        | 89,704       | 5,342        | 31,480       | 2,054        |
| Stearin, vegetable.....do..                                | 1,020                | 234          | 4,159        | 767          | 1,810        | 352          |
| Sugar, molasses, and sirup:                                |                      |              |              |              |              |              |
| Molasses.....gallons..                                     | 5,414                | 1,191        | 6,686        | 1,311        | 4,828        | 1,097        |
| Sirup.....do..   | 3,184                | 2,012        | 16,732       | 10,299       | 6,595        | 4,164        |
| Sugar, refined.....pounds..                                | 407,296              | 27,039       | 1,475,408    | 114,737      | 924,192      | 94,877       |
| Total sugar, molasses, and sirup.....                      |                      | 30,242       |              | 126,347      |              | 100,138      |
| Tobacco:   |                      |              |              |              |              |              |
| Leaf.....pounds..  | 403,871              | 122,600      | 765,913      | 259,438      | 467,662      | 244,897      |
| Stems and trimmings.....do..                               | 2,955                | 318          | 10,755       | 547          | 12,238       | 635          |
| Total tobacco.....do..                                     | 406,826              | 122,918      | 776,678      | 259,985      | 479,900      | 245,532      |
| Vegetables:  |                      |              |              |              |              |              |
| Fresh or dried—  |                      |              |              |              |              |              |
| Beans.....bushels..  | 2,399                | 14,226       | 3,795        | 19,966       | 1,765        | 7,672        |
| Onions.....do..  | 683                  | 1,112        | 817          | 2,095        | 946          | 2,076        |
| Peas, dried.....do..                                       | 322                  | 1,689        | 476          | 2,665        | 296          | 1,416        |
| Potatoes.....do..  | 3,853                | 5,834        | 3,642        | 6,475        | 4,154        | 10,200       |
| Total fresh or dried.....do....                            | 7,267                | 22,861       | 8,730        | 31,201       | 7,161        | 21,364       |
| Prepared or preserved—                                     |                      |              |              |              |              |              |
| Canned.....  |                      | 12,420       |              | 11,355       |              | 6,340        |
| Pickles and sauces.....                                    |                      | 1,130        |              | 2,040        |              | 2,273        |
| Total prepared or preserved.....                           |                      | 13,550       |              | 13,395       |              | 8,613        |
| All other vegetables.....                                  |                      | 2,204        |              | 3,237        |              | 2,807        |
| Total vegetables.....                                      |                      | 38,615       |              | 47,833       |              | 32,784       |
| Vinegar.....gallons..                                      | 319                  | 89           | 469          | 138          | 291          | 113          |
| Yeast.....   |                      | 1,203        |              | 1,100        |              | 646          |
| Total vegetable matter, including forest products.....     |                      | 1,865,707    |              | 3,030,582    |              | 3,050,820    |
| Total vegetable matter, excluding forest products.....     |                      | 1,777,635    |              | 2,880,257    |              | 2,858,972    |
| Total agricultural exports, including forest products..... |                      | 2,844,687    |              | 4,257,483    |              | 3,658,467    |
| Total agricultural exports, excluding forest products..... |                      | 2,756,665    |              | 4,107,159    |              | 3,466,620    |

# Imports and Exports of Agricultural Products.

749

TABLE 386.—*Value of principal groups of farm and forest products exported from and imported into the United States, 1918-1920.*

[Compiled from reports on the Foreign Commerce of the United States.]

| Article.                                   | Exports (domestic merchandise). |                      |                      | Imports.             |                      |                      |
|--|---------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|  | Year ending Dec. 31—            |                      |                      | Year ending Dec. 31— |                      |                      |
|  | 1918                            | 1919                 | 1920                 | 1918                 | 1919                 | 1920                 |
| <b>FARM PRODUCTS.</b>                      |                                 |                      |                      |                      |                      |                      |
| <b>ANIMAL MATTER.</b>                      |                                 |                      |                      |                      |                      |                      |
| Animals, live.....                         | \$15,045,142                    | \$12,003,684         | \$18,332,960         | \$28,631,161         | \$58,037,361         | \$31,552,223         |
| Dairy products.....                        | 95,957,723                      | 146,477,244          | 80,817,302           | 6,940,202            | 12,863,812           | 30,337,576           |
| Eggs, fresh, canned, etc..                 | 9,146,280                       | 18,943,978           | 13,878,795           | 3,325,933            | 14,925,730           | 12,444,261           |
| Feathers, crude.....                       | 252,903                         | 863,250              | 678,644              | 1,520,199            | 3,550,956            | 2,597,047            |
| Packing-house products.                    | 853,732,220                     | 1,038,294,077        | 485,272,079          | 175,995,614          | 345,381,052          | 300,940,054          |
| Wool.....                                  | 462,969                         | 2,230,629            | 4,936,740            | 194,198,598          | 341,886,776          | 301,038,193          |
| Other animal matter....                    | 4,332,526                       | 8,088,431            | 3,731,349            | 251,772,616          | 216,764,501          | 126,972,068          |
| <b>Total animal matter.....</b>            | <b>978,979,762</b>              | <b>1,226,901,293</b> | <b>607,647,869</b>   | <b>663,530,808</b>   | <b>995,302,757</b>   | <b>810,520,505</b>   |
| <b>VEGETABLE MATTER.</b>                   |                                 |                      |                      |                      |                      |                      |
| Argols or winelees.....                    |                                 |                      |                      | 4,824,504            | 4,296,972            | 4,464,998            |
| Cocos and chocolate.....                   | 6,961,457                       | 21,880,801           | 9,047,918            | 37,972,369           | 58,241,834           | 54,811,166           |
| Coffee.....                                | 6,661,802                       | 8,816,581            | 9,803,574            | 99,423,362           | 261,270,106          | 252,450,661          |
| Cotton.....                                | 674,122,790                     | 1,137,371,252        | 1,136,408,916        | 41,624,242           | 71,536,290           | 138,743,702          |
| Fibers, vegetable, other.                  |                                 |                      |                      | 114,386,687          | 81,777,968           | 80,377,407           |
| Fruits.....                                | 30,228,780                      | 122,678,733          | 59,417,950           | 25,054,154           | 38,314,146           | 56,562,838           |
| Ginseng.....                               | 1,372,586                       | 3,338,531            | 1,875,348            |                      |                      |                      |
| Glucoase and grapesugar.                   | 3,458,927                       | 15,139,944           | 10,067,830           |                      |                      |                      |
| Grain and grain products                   | 790,767,657                     | 902,220,969          | 1,049,233,622        | 39,465,098           | 33,355,174           | 105,331,087          |
| Hay.....                                   | 904,030                         | 962,975              | 1,797,306            | 4,860,460            | 3,031,537            | 4,482,015            |
| Hops.....                                  | 970,598                         | 8,832,255            | 17,088,472           | 50,862               | 237,009              | 2,932,830            |
| Indigo.....                                |                                 |                      |                      | 2,610,375            | 692,488              | 736,720              |
| Licorice root.....                         |                                 |                      |                      | 1,997,269            | 3,864,619            | 3,454,839            |
| Liquors, alcoholic.....                    | 9,900,600                       | 19,449,569           | 24,471,006           | 5,046,531            | 524,882              | 3,269,364            |
| Nursery stock.....                         | 239,621                         | 405,270              | 405,006              | 2,007,323            | 4,020,671            | 5,079,603            |
| Nuts.....                                  | 2,144,268                       | 3,585,819            | 1,972,474            | 49,930,283           | 57,510,164           | 59,659,019           |
| Oil cake and meal.....                     | 2,785,450                       | 36,040,691           | 18,011,549           | 1,764,574            | 2,370,827            | 4,415,249            |
| Oil, vegetable.....                        | 29,418,708                      | 100,350,904          | 59,005,308           | 110,908,782          | 130,000,165          | 113,489,731          |
| Opium, crude.....                          |                                 |                      |                      | 2,675,963            | 8,779,653            | 1,311,625            |
| Rice, rice flour, meal, etc.               | 12,424,710                      | 34,775,622           | 37,469,175           | 23,488,468           | 12,241,631           | 14,085,728           |
| Sago, tapioca, etc.....                    |                                 |                      |                      | 3,903,221            | 5,207,972            | 5,228,578            |
| Seeds.....                                 | 5,496,450                       | 8,542,411            | 7,015,763            | 45,192,743           | 69,194,920           | 102,467,114          |
| Spices.....                                | 480,508                         | 588,462              | 516,171              | 14,098,998           | 9,803,636            | 11,641,083           |
| Starch.....                                | 2,775,628                       | 15,562,165           | 8,945,524            | 2,108,260            | 242,000              | 1,016,706            |
| Sugar, molasses, and sirup.....            | 30,241,699                      | 126,347,952          | 100,138,702          | 252,689,604          | 398,457,408          | 1,022,282,044        |
| Tes.....                                   |                                 |                      |                      | 29,539,740           | 20,145,864           | 24,392,427           |
| Tobacco.....                               | 122,918,151                     | 259,985,764          | 245,532,069          | 54,080,496           | 75,145,564           | 81,630,011           |
| Vanilla beans.....                         |                                 |                      |                      | 1,185,632            | 2,407,093            | 2,406,335            |
| Vegetables.....                            | 38,618,058                      | 47,832,634           | 32,784,416           | 32,683,045           | 40,465,256           | 40,420,326           |
| Wax, vegetable.....                        |                                 |                      |                      | 3,631,635            | 3,809,635            | 2,168,410            |
| Other vegetable matter..                   | 4,791,451                       | 6,048,106            | 4,968,461            | 394,990              | 60,262               | 785,963              |
| <b>Total vegetable matter.....</b>         | <b>1,777,684,959</b>            | <b>2,880,257,400</b> | <b>2,858,971,950</b> | <b>1,007,665,250</b> | <b>1,397,877,625</b> | <b>2,200,847,662</b> |
| <b>Total farm products.....</b>            | <b>2,756,664,721</b>            | <b>4,107,158,753</b> | <b>3,466,619,819</b> | <b>1,671,196,058</b> | <b>2,392,880,382</b> | <b>3,011,368,157</b> |
| <b>FOREST PRODUCTS.</b>                    |                                 |                      |                      |                      |                      |                      |
| Cork wood or cork bark..                   |                                 |                      |                      | 1,898,193            | 1,802,596            | 2,725,008            |
| Dye woods and extracts of                  | 1,551,380                       | 1,355,936            | 2,605,060            | 1,923,749            | 1,086,238            | 2,427,288            |
| Gums.....                                  |                                 |                      |                      | 170,722,432          | 251,944,196          | 300,203,574          |
| Naval stores.....                          | 10,235,981                      | 31,433,997           | 34,803,389           |                      |                      |                      |
| Tanning materials, n.e.s.                  | 3,144,649                       | 5,645,875            | 3,696,356            | 6,738,920            | 9,159,245            | 11,311,058           |
| Wood.....                                  | 69,228,405                      | 107,998,339          | 146,735,936          | 64,728,468           | 71,187,038           | 111,170,275          |
| Wood pulp.....                             | 1,733,872                       | 3,048,461            | 2,947,287            | 31,477,175           | 37,048,331           | 39,418,185           |
| Other forest products....                  | 2,127,617                       | 841,642              | 1,359,543            | 2,115,572            | 2,247,828            | 4,076,827            |
| <b>Total forest products.....</b>          | <b>88,021,904</b>               | <b>150,324,280</b>   | <b>191,847,551</b>   | <b>279,604,509</b>   | <b>374,455,432</b>   | <b>521,332,215</b>   |
| <b>Total farm and forest products.....</b> | <b>2,844,686,625</b>            | <b>4,257,483,033</b> | <b>3,658,467,370</b> | <b>1,950,800,567</b> | <b>2,767,335,814</b> | <b>3,532,700,372</b> |

TABLE 387.—Exports of selected domestic agricultural products, 1852-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. Where figures are lacking, either there were no exports or they were not separately classified for publication. "Beef salted or pickled," and "Pork, salted or pickled," barrels, 1851-1865, were reduced to pounds at the rate of 200 pounds per barrel, and tierces, 1855-1865, at the rate of 300 pounds per tierce; cottonseed oil, 1910; pounds reduced to gallons at the rate of 7.5 pounds per gallon. It is assumed that 1 barrel of corn meal is the product of 4 bushels of corn, and 1 barrel of wheat flour the product of 5 bushels of wheat prior to 1880 and 4½ bushels of wheat in 1880 and subsequently.]

[In round thousands, i. e., 000 omitted.]

| Year ending<br>June 30— | Cattle.         | Cheese.          | Packing-house products.                     |                  |                            |                  |  |                           |   |   |
|-------------------------|-----------------|------------------|---|------------------|----------------------------|------------------|--|---------------------------|---|---|
|                         |                 |                  | Beef,<br>cured—<br>salted<br>or<br>pickled. | Beef,<br>fresh.  | Beef<br>oils—<br>oleo oil. | Beef<br>tallow.  | Beef<br>and its<br>prod-<br>ucts—<br>total,<br>as far as<br>ascertain-<br>able. <sup>1</sup> | Pork,<br>cured—<br>bacon. | Pork,<br>cured—<br>hams<br>and<br>should-<br>ers. | Pork,<br>cured—<br>salted<br>or<br>pickled. |
| Average:                | Thou-<br>sands. | 1,000<br>pounds. | 1,000<br>pounds.                            | 1,000<br>pounds. | 1,000<br>pounds.           | 1,000<br>pounds. | 1,000<br>pounds.   | 1,000<br>pounds.          | 1,000<br>pounds.                                  | 1,000<br>pounds.                            |
| 1852-1856.              | 1               | 6,200            | 25,981                                      | .....            | .....                      | 7,469            | 33,449   | 30,005                    | .....   | 40,543                                      |
| 1857-1861.              | 20              | 13,906           | 26,986                                      | .....            | .....                      | 13,215           | 40,200   | 30,583                    | .....   | 34,854                                      |
| 1862-1866.              | 7               | 42,683           | 27,663                                      | .....            | .....                      | 43,203           | 70,865   | 10,797                    | .....   | 52,551                                      |
| 1867-1871.              | .....           | 52,881           | 26,955                                      | .....            | .....                      | 27,578           | 54,532   | 45,790                    | .....   | 28,879                                      |
| 1872-1876.              | 46              | 87,174           | 35,827                                      | .....            | .....                      | 78,994           | 114,821  | 313,402                   | .....   | 60,429                                      |
| 1877-1881.              | 127             | 129,670          | 40,175                                      | 69,601           | .....                      | 96,828           | 218,710  | 648,634                   | .....   | 85,998                                      |
| 1882-1886.              | 132             | 108,790          | 47,401                                      | 97,328           | 30,276                     | 48,745           | 225,626  | 355,905                   | 47,635  | 72,355                                      |
| 1887-1891.              | 244             | 86,355           | 65,614                                      | 136,448          | 50,482                     | 91,608           | 411,798  | 419,935                   | 60,697  | 73,985                                      |
| 1892-1896.              | 349             | 66,906           | 64,899                                      | 207,373          | 102,039                    | 56,977           | 507,177  | 438,848                   | 96,107  | 64,827                                      |
| 1897-1901.              | 415             | 46,109           | 52,242                                      | 305,626          | 139,373                    | 86,082           | 637,268  | 536,287                   | 200,853   | 112,788                                     |
| 1902-1906.              | 508             | 19,244           | 59,208                                      | 272,148          | 156,925                    | 59,893           | 622,843  | 292,722                   | 206,902   | 116,823                                     |
| 1907-1911.              | 254             | 9,152            | 46,187                                      | 144,800          | 170,530                    | 66,356           | 448,024  | 209,005                   | 189,603   | 90,810                                      |
| 1912-1916.              | 35              | 22,224           | 31,440                                      | 86,135           | 99,892                     | 24,476           | 281,576  | 306,012                   | 203,076   | 52,946                                      |
| 1901.                   | 459             | 39,814           | 55,313                                      | 351,748          | 161,651                    | 77,167           | 705,105  | 456,123                   | 216,572   | 138,644                                     |
| 1902.                   | 393             | 27,203           | 48,633                                      | 301,824          | 138,546                    | 34,066           | 596,255  | 383,151                   | 227,655   | 115,806                                     |
| 1903.                   | 402             | 18,987           | 52,801                                      | 254,796          | 126,010                    | 27,369           | 546,055  | 207,336                   | 214,133   | 95,267                                      |
| 1904.                   | 593             | 23,335           | 57,585                                      | 299,580          | 165,184                    | 76,924           | 663,147  | 249,666                   | 194,949   | 112,375                                     |
| 1905.                   | 568             | 10,134           | 55,935                                      | 236,487          | 145,228                    | 63,537           | 575,875  | 262,247                   | 203,459   | 118,887                                     |
| 1906.                   | 584             | 16,562           | 81,088                                      | 268,054          | 209,658                    | 97,567           | 732,885  | 361,211                   | 194,211   | 141,821                                     |
| 1907.                   | 423             | 17,285           | 62,645                                      | 281,652          | 195,337                    | 127,858          | 689,762  | 260,419                   | 209,481   | 166,427                                     |
| 1908.                   | 349             | 8,439            | 46,958                                      | 201,154          | 212,541                    | 91,398           | 579,303  | 241,190                   | 221,770   | 149,506                                     |
| 1909.                   | 208             | 6,823            | 44,494                                      | 122,953          | 179,985                    | 53,333           | 418,844  | 244,579                   | 212,170   | 52,355                                      |
| 1910.                   | 139             | 2,847            | 36,554                                      | 75,730           | 126,092                    | 29,380           | 286,296  | 152,163                   | 146,885   | 40,032                                      |
| 1911.                   | 150             | 10,367           | 40,284                                      | 42,511           | 138,697                    | 29,813           | 265,924  | 156,675                   | 157,709   | 45,729                                      |
| 1912.                   | 106             | 6,338            | 38,088                                      | 15,264           | 126,467                    | 39,451           | 233,925  | 208,574                   | 204,044   | 56,321                                      |
| 1913.                   | 25              | 2,599            | 25,857                                      | 7,362            | 92,850                     | 30,586           | 170,208  | 200,994                   | 159,545   | 53,749                                      |
| 1914.                   | 18              | 2,428            | 23,266                                      | 6,394            | 97,017                     | 15,813           | 151,212  | 193,964                   | 165,882   | 45,543                                      |
| 1915.                   | 5               | 55,363           | 31,875                                      | 170,441          | 80,482                     | 20,240           | 394,981  | 346,718                   | 203,701   | 45,656                                      |
| 1916.                   | 21              | 44,394           | 38,115                                      | 231,214          | 102,646                    | 16,289           | 457,556  | 579,809                   | 282,209   | 63,461                                      |
| 1917.                   | 13              | 66,050           | 58,054                                      | 197,177          | 67,110                     | 15,209           | 423,674  | 667,152                   | 266,657   | 46,993                                      |
| 1918.                   | 18              | 44,303           | 54,468                                      | 370,033          | 56,603                     | 5,015            | 600,132  | 515,294                   | 419,572   | 33,222                                      |
| Calendar<br>year:       |                 |                  |   |                  |                            |                  |  |                           |   |   |
| 1918.....               | 17              | 43,405           | 44,206                                      | 514,342          | 69,106                     | 4,223            | 792,793  | 1,104,788                 | 537,213   | 36,672                                      |
| 1919.....               | 70              | 14,160           | 42,805                                      | 174,427          | 75,685                     | 38,954           | 429,432  | 1,190,297                 | 696,796   | 34,114                                      |
| 1920.....               | 85              | 16,292           | 26,771                                      | 89,649           | 74,368                     | 20,692           | 268,317  | 636,676                   | 185,247   | 38,709                                      |

<sup>1</sup> Includes canned, cured, and fresh beef, oleo oil, oleomargarine, tallow, and stearin from animal fats.

TABLE 387.—Exports of selected domestic agricultural products, 1852-1920—Continued.

| Year ending<br>June 30— | Packing-house products. |   |                         | Apples,<br>fresh. | Corn<br>and corn<br>meal (in<br>terms of<br>grain). | Cotton.          | Glucose<br>and grape<br>sugar. | Corn-<br>oil<br>cake<br>and oil-<br>cake<br>meal. | Cotton<br>seed oil-<br>cake<br>and oil-<br>cake-<br>meal. |
|-------------------------|-------------------------|---|-------------------------|-------------------|---|------------------|--------------------------------|---|---|
|                         | Pork-<br>lard.          | Pork and<br>its prod-<br>ucts—<br>total, as<br>far as<br>ascertain-<br>able. <sup>1</sup> | Lard<br>com-<br>pounds. |                   |   |                  |                                |   |   |
| Average:                | 1,000<br>pounds.        | 1,000<br>pounds.  | 1,000<br>pounds.        | 1,000<br>barrels. | 1,000<br>bushels.                                   | 1,000<br>pounds. | 1,000<br>pounds.               | 1,000<br>pounds.                                  | 1,000<br>pounds.  |
| 1852-1856.....          | 33,355                  | 103,903   | .....                   | 37                | 7,123   | 1,110,493        | .....                          | .....   | .....   |
| 1857-1861.....          | 37,966                  | 103,404   | .....                   | 57                | 6,558   | 1,125,715        | .....                          | .....   | .....   |
| 1862-1866.....          | 89,138                  | 252,486   | .....                   | 119               | 12,060  | 137,582          | .....                          | .....   | .....   |
| 1867-1871.....          | 53,579                  | 128,249   | .....                   | .....             | 9,924   | 902,410          | .....                          | .....   | .....   |
| 1872-1876.....          | 194,198                 | 558,029   | .....                   | 133               | 38,561  | 1,245,805        | .....                          | .....   | .....   |
| 1877-1881.....          | 331,458                 | 1,075,793   | .....                   | 510               | 88,190  | 1,735,892        | .....                          | .....   | .....   |
| 1882-1886.....          | 263,425                 | 739,456   | .....                   | 402               | 49,992  | 1,968,178        | .....                          | .....   | .....   |
| 1887-1891.....          | 381,389                 | 936,248   | .....                   | 523               | 54,606  | 2,439,650        | 4,474                          | .....   | .....   |
| 1892-1896.....          | 451,547                 | 1,052,134   | .....                   | 521               | 63,980  | 2,736,655        | 125,574                        | .....   | .....   |
| 1897-1901.....          | 652,418                 | 1,528,139   | 21,792                  | 780               | 192,531   | 3,447,910        | 209,280                        | .....   | 1,005,100   |
| 1902-1906.....          | 592,131                 | 1,242,137   | 52,954                  | 1,389             | 74,615  | 3,632,268        | 154,867                        | 21,888  | 1,066,790   |
| 1907-1911.....          | 519,746                 | 1,028,997   | 75,765                  | 1,226             | 56,568  | 4,004,770        | 145,065                        | 61,733  | 989,738   |
| 1912-1916.....          | 487,056                 | 1,109,488   | 62,221                  | 1,786             | 38,774  | 4,469,202        | 183,141                        | 54,361  | 1,151,609   |
| 1901.....               | 611,358                 | 1,462,370   | 23,380                  | 884               | 181,405   | 3,359,062        | 204,210                        | 12,703  | 1,258,687   |
| 1902.....               | 556,840                 | 1,337,316   | 36,202                  | 490               | 28,029  | 3,523,975        | 130,420                        | 14,740  | 1,060,466   |
| 1903.....               | 490,756                 | 1,042,120   | 46,130                  | 1,656             | 70,639  | 3,569,142        | 123,240                        | 8,093   | 1,100,393   |
| 1904.....               | 561,303                 | 1,148,255   | 53,604                  | 2,018             | 58,222  | 3,089,856        | 152,769                        | 14,015  | 820,349   |
| 1905.....               | 610,239                 | 1,220,032   | 61,215                  | 1,500             | 90,293  | 4,339,322        | 175,251                        | 24,171  | 1,251,908   |
| 1906.....               | 741,517                 | 1,464,960   | 67,621                  | 1,209             | 119,894   | 3,634,045        | 189,656                        | 48,421  | 1,110,835   |
| 1907.....               | 627,560                 | 1,268,065   | 80,149                  | 1,539             | 86,368  | 4,518,217        | 151,629                        | 56,809  | 1,340,967   |
| 1908.....               | 603,414                 | 1,237,211   | 75,183                  | 1,050             | 55,064  | 3,816,999        | 129,687                        | 66,128  | 929,287   |
| 1909.....               | 528,723                 | 1,053,142   | 75,183                  | 896               | 37,665  | 4,447,985        | 112,225                        | 53,234  | 1,233,750   |
| 1910.....               | 362,928                 | 707,110   | 74,557                  | 922               | 38,128  | 3,206,708        | 149,820                        | 49,109  | 640,089   |
| 1911.....               | 476,108                 | 879,455   | 73,754                  | 1,721             | 65,615  | 4,033,941        | 181,963                        | 83,385  | 804,597   |
| 1912.....               | 532,286                 | 1,071,952   | 62,523                  | 1,456             | 41,797  | 5,536,125        | 171,156                        | 72,490  | 1,293,660   |
| 1913.....               | 519,025                 | 984,697   | 67,457                  | 2,150             | 50,780  | 4,562,296        | 200,149                        | 76,263  | 1,123,092   |
| 1914.....               | 481,458                 | 921,913   | 58,304                  | 1,507             | 10,726  | 4,760,941        | 199,531                        | 59,031  | 799,97  |
| 1915.....               | 475,532                 | 1,106,180   | 69,981                  | 2,352             | 50,668  | 4,403,578        | 153,463                        | 45,026  | 1,479,065   |
| 1916.....               | 427,011                 | 1,462,697   | 52,843                  | 1,486             | 39,897  | 3,084,070        | 186,406                        | 13,996  | 1,067,222   |
| 1917.....               | 444,770                 | 1,501,948   | 56,359                  | 1,740             | 66,753  | 3,088,081        | 214,973                        | 15,758  | 1,150,160   |
| 1918.....               | 392,506                 | 1,692,124   | 31,278                  | 635               | 49,073  | 2,320,512        | 97,858                         | 458   | 44,681  |
| Calendar year:          |                         |   |                         |                   |   |                  |                                |   |   |
| 1918.....               | 548,818                 | 2,251,033   | 43,977                  | 580               | 47,059  | 2,118,175        | 57,332                         | 69  | 11,667  |
| 1919.....               | 760,902                 | 2,638,721   | 124,963                 | 1,712             | 16,002  | 3,367,678        | 253,618                        | 964   | 628,133   |
| 1920.....               | 612,280                 | 1,536,894   | 32,051                  | 1,798             | 21,230  | 3,179,313        | 162,496                        | 131   | 340,042   |

<sup>1</sup> Includes canned, fresh, salted or pickled pork, lard, neutral lard, lard oil, bacon, and hams.

TABLE 387.—Exports of selected domestic agricultural products, 1852-1920—Continued.

| Year ending<br>June 30— | Prunes.          | Tobacco.         | Hops.            | Oils,<br>vegeta-<br>ble—<br>cotton-<br>seed<br>oil. | Rice<br>and<br>rice<br>bran,<br>meal,<br>and<br>polish. | Sugar,<br>raw and<br>refined. | Wheat.            | Wheat<br>flour.   | Wheat<br>and<br>wheat<br>flour<br>(in<br>terms of<br>grain). |
|-------------------------|------------------|------------------|------------------|---|---|-------------------------------|-------------------|-------------------|--|
|                         | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>gallons.                                   | 1,000<br>pounds.  | 1,000<br>pounds.              | 1,000<br>bushels. | 1,000<br>barrels. | 1,000<br>bushels.  |
| <b>Average:</b>         |                  |                  |                  |   |   |                               |                   |                   |  |
| 1852-1856 .....         | 140, 184         | 140, 184         | 1, 163           | .....   | 56, 615   | 7, 730                        | 4, 715            | 2, 892            | 19, 173  |
| 1857-1861 .....         | 167, 711         | 167, 711         | 2, 216           | .....   | 65, 732   | 6, 015                        | 12, 378           | 3, 313            | 28, 970  |
| 1862-1866 .....         | 140, 208         | 140, 208         | 4, 719           | .....   | 2, 258  | 3, 008                        | 22, 530           | 3, 531            | 40, 184  |
| 1867-1871 .....         | 194, 754         | 194, 754         | 6, 487           | .....   | 1, 857  | 4, 357                        | 22, 107           | 2, 585            | 35, 032  |
| 1872-1876 .....         | 241, 848         | 241, 848         | 3, 446           | 547   | 391   | 20, 142                       | 48, 958           | 3, 416            | 66, 037  |
| 1877-1881 .....         | 266, 315         | 266, 315         | 10, 446          | 4, 498  | 602   | 41, 718                       | 107, 781          | 5, 376            | 133, 263   |
| 1882-1886 .....         | 237, 942         | 237, 942         | 9, 584           | 3, 468  | 561   | 107, 130                      | 82, 884           | 8, 620            | 121, 675   |
| 1887-1891 .....         | 259, 248         | 259, 248         | 7, 184           | 7, 121  | 3, 210  | 75, 074                       | 64, 739           | 11, 287           | 115, 529   |
| 1892-1896 .....         | 281, 746         | 281, 746         | 15, 147          | 15, 783   | 10, 278   | 13, 999                       | 99, 914           | 15, 713           | 170, 624   |
| 1897-1901 .....         | 304, 402         | 304, 402         | 15, 467          | 42, 863   | 18, 407   | 11, 214                       | 120, 247          | 17, 151           | 197, 427   |
| 1902-1906 .....         | 48, 551          | 325, 539         | 11, 476          | 38, 806   | 45, 978   | 14, 807                       | 70, 527           | 15, 444           | 140, 026   |
| 1907-1911 .....         | 47, 039          | 334, 396         | 14, 774          | 38, 784   | 27, 195   | 61, 430                       | 62, 855           | 11, 841           | 116, 138   |
| 1912-1916 .....         | 72, 599          | 408, 006         | 18, 533          | 39, 801   | 60, 043   | 470, 729                      | 129, 415          | 13, 185           | 188, 748   |
| 1901 .....              | 10, 022          | 315, 788         | 14, 964          | 49, 357   | 25, 528   | 8, 875                        | 132, 061          | 18, 651           | 215, 990   |
| 1902 .....              | 23, 359          | 301, 007         | 10, 715          | 33, 043   | 29, 591   | 7, 572                        | 154, 856          | 17, 759           | 234, 773   |
| 1903 .....              | 66, 335          | 368, 184         | 7, 795           | 35, 643   | 19, 750   | 10, 520                       | 114, 181          | 19, 716           | 202, 906   |
| 1904 .....              | 73, 146          | 311, 972         | 10, 986          | 29, 014   | 29, 122   | 15, 419                       | 44, 230           | 16, 999           | 120, 728   |
| 1905 .....              | 54, 994          | 334, 302         | 14, 859          | 51, 536   | 113, 263  | 18, 343                       | 4, 394            | 8, 826            | 44, 113  |
| 1906 .....              | 24, 870          | 312, 227         | 13, 027          | 43, 794   | 38, 142   | 22, 176                       | 34, 973           | 13, 919           | 97, 609  |
| 1907 .....              | 44, 400          | 340, 743         | 16, 810          | 41, 890   | 30, 174   | 21, 238                       | 76, 569           | 15, 685           | 146, 700   |
| 1908 .....              | 28, 148          | 330, 813         | 22, 920          | 41, 020   | 28, 444   | 25, 511                       | 100, 371          | 13, 927           | 163, 044   |
| 1909 .....              | 22, 602          | 287, 901         | 10, 447          | 51, 087   | 20, 511   | 79, 946                       | 66, 923           | 10, 521           | 114, 268   |
| 1910 .....              | 89, 015          | 357, 196         | 10, 589          | 29, 861   | 26, 779   | 125, 507                      | 46, 680           | 9, 041            | 87, 364  |
| 1911 .....              | 51, 081          | 355, 327         | 13, 105          | 30, 069   | 30, 063   | 54, 947                       | 23, 729           | 10, 129           | 69, 312  |
| 1912 .....              | 74, 328          | 379, 845         | 12, 191          | 53, 263   | 39, 447   | 79, 594                       | 30, 160           | 11, 006           | 79, 639  |
| 1913 .....              | 117, 951         | 418, 797         | 17, 591          | 42, 031   | 38, 908   | 43, 995                       | 91, 603           | 11, 395           | 142, 880   |
| 1914 .....              | 69, 814          | 449, 750         | 24, 263          | 25, 728   | 22, 414   | 50, 896                       | 92, 394           | 11, 821           | 145, 500   |
| 1915 .....              | 43, 479          | 348, 346         | 16, 210          | 42, 449   | 77, 480   | 549, 007                      | 259, 643          | 16, 183           | 332, 465   |
| 1916 .....              | 57, 423          | 443, 263         | 22, 410          | 35, 535   | 121, 967  | 1, 630, 151                   | 173, 274          | 15, 521           | 243, 117   |
| 1917 .....              | 59, 645          | 411, 599         | 4, 825           | 21, 188   | 181, 372  | 1, 248, 908                   | 149, 831          | 11, 943           | 203, 574   |
| 1918 .....              | 32, 927          | 289, 171         | 3, 495           | 13, 437   | 196, 363  | 576, 483                      | 34, 119           | 21, 880           | 132, 579   |
| <b>Calendar year:</b>   |                  |                  |                  |   |   |                               |                   |                   |  |
| 1918 .....              | 22, 888          | 406, 827         | 3, 670           | 15, 876   | 167, 933  | 407, 296                      | 111, 177          | 21, 707           | 208, 857   |
| 1919 .....              | 108, 208         | 776, 678         | 29, 798          | 25, 751   | 376, 876  | 1, 475, 408                   | 148, 086          | 26, 450           | 267, 111   |
| 1920 .....              | 75, 139          | 479, 900         | 25, 624          | 24, 634   | 392, 613  | 924, 192                      | 218, 287          | 19, 854           | 307, 630   |

TABLE 388.—Imports of selected agricultural products, 1852-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. Where figures are lacking, either there were no imports or they were not separately classified for publication. "Silk" includes, prior to 1881, only "Silk, raw or as reeled from the cocoon;" in 1881 and 1882 are included this item and "Silk waste;" after 1882, both these items and "Silk cocoons." From "Cocoa and chocolate" are omitted in 1860, 1861, and 1872 to 1881, small quantities of chocolate, the official returns for which were given only in value. "Jute and jute butts" includes in 1858 and 1859 an unknown quantity of "Sisal grass, coir, etc.," and in 1865-1868 an unknown quantity of "Hemp." Cattle hides are included in "Hides and skins other than cattle and goat" in 1895-1897. Olive oil for table use includes in 1862-1864 and 1885-1905 all olive oil. Sisal grass includes in 1884-1890 "Other vegetable substances." Hemp includes in 1885-1888 all substitutes for hemp.]

[In round thousands, i. e., 000 omitted.]

| Year ending<br>June 30— | Cheese.           | Silk.                                       | Wool.             | Al-<br>monds.                        | Argols<br>or<br>wine<br>lees. | Cocoa<br>and<br>choco-<br>late,<br>total. | Coffee.          | Corn.                         | Oats,<br>includ-<br>ing<br>oat-<br>meal. | Wheat.         |
|-------------------------|-------------------|---|-------------------|--------------------------------------|-------------------------------|---|------------------|-------------------------------|--|----------------|
|                         | 1,000<br>pounds.  | 1,000<br>pounds.                            | 1,000<br>pounds.  | 1,000<br>pounds.                     | 1,000<br>pounds.              | 1,000<br>pounds.                          | 1,000<br>pounds. | 1,000<br>bush.                | 1,000<br>bush.                           | 1,000<br>bush. |
| Average:                | 1,054             | 1,378                                       | 19,067            | 3,461                                | 2,487                         | 196,583                                   | 216,235          | 75                            | 1,515                                    | 2,122          |
| 1852-1856.....          | 1,054             | 1,378                                       | 19,067            | 3,461                                | 2,487                         | 196,583                                   | 216,235          | 75                            | 1,515                                    | 2,122          |
| 1857-1861.....          | 1,378             | 1,378                                       | 19,067            | 3,251                                | 2,482                         | 216,235                                   | 216,235          | 75                            | 1,515                                    | 2,122          |
| 1862-1866.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1867-1871.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1872-1876.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1877-1881.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1882-1886.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1887-1891.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1892-1896.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1897-1901.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1902-1906.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1907-1911.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1912-1916.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    | .....          |
| 1901.....               | 15,329            | 10,406                                      | 103,584           | 5,140                                | 28,599                        | 47,620                                    | 854,871          | 5                             | 32                                       | 600            |
| 1902.....               | 17,068            | 14,235                                      | 166,577           | 9,889                                | 29,276                        | 52,879                                    | 1,091,004        | 18                            | 39                                       | 119            |
| 1903.....               | 20,671            | 15,271                                      | 177,138           | 8,142                                | 29,967                        | 65,047                                    | 915,086          | 41                            | 150                                      | 1,077          |
| 1904.....               | 22,707            | 16,723                                      | 173,743           | 9,839                                | 24,572                        | 75,071                                    | 995,043          | 17                            | 184                                      | 7              |
| 1905.....               | 22,096            | 22,357                                      | 249,136           | 11,745                               | 26,282                        | 77,383                                    | 1,047,793        | 15                            | 56                                       | 3,103          |
| 1906.....               | 27,287            | 17,352                                      | 201,689           | 15,009                               | 28,141                        | 84,127                                    | 851,669          | 10                            | 40                                       | 58             |
| 1907.....               | 33,849            | 18,744                                      | 203,848           | 14,234                               | 30,541                        | 97,060                                    | 985,321          | 11                            | 91                                       | 375            |
| 1908.....               | 32,531            | 16,662                                      | 126,981           | 17,145                               | 26,739                        | 86,605                                    | 890,640          | 20                            | 383                                      | 342            |
| 1909.....               | 35,548            | 25,188                                      | 286,409           | 11,020                               | 32,116                        | 132,661                                   | 1,049,869        | 258                           | 6,692                                    | 41             |
| 1910.....               | 40,818            | 23,457                                      | 263,928           | 18,556                               | 28,183                        | 111,071                                   | 871,470          | 118                           | 1,035                                    | 184            |
| 1911.....               | 45,569            | 26,666                                      | 187,648           | 15,523                               | 29,175                        | 140,971                                   | 875,367          | 52                            | 1,107                                    | 509            |
| 1912.....               | 46,542            | 26,585                                      | 193,401           | 17,231                               | 33,661                        | 148,786                                   | 885,201          | 53                            | 2,622                                    | 2,099          |
| 1913.....               | 49,388            | 32,102                                      | 195,293           | 15,671                               | 29,479                        | 143,510                                   | 863,131          | 903                           | 1,724                                    | 798            |
| 1914.....               | 63,784            | 34,546                                      | 247,649           | 19,038                               | 29,793                        | 179,364                                   | 1,001,528        | 12,367                        | 12,274                                   | 1,979          |
| 1915.....               | 50,139            | 31,053                                      | 308,083           | 17,111                               | 28,625                        | 194,734                                   | 1,118,691        | 9,898                         | 1,681                                    | 426            |
| 1916.....               | 30,088            | 41,925                                      | 534,828           | 16,597                               | 34,721                        | 245,579                                   | 1,201,104        | 5,208                         | 1,665                                    | 5,703          |
| 1917.....               | 14,482            | 40,351                                      | 372,372           | 23,424                               | 32,926                        | 340,483                                   | 1,319,871        | 2,267                         | 1,762                                    | 24,139         |
| 1918.....               | 9,839             | 43,681                                      | 379,130           | 28,340                               | 30,267                        | 399,312                                   | 1,143,891        | 3,196                         | 1,591                                    | 28,177         |
| Calendar year:          |                   |   |                   |                                      |                               |   |                  |                               |  |                |
| 1918.....               | 7,562             | 48,721                                      | 453,727           | 27,694                               | 27,687                        | 360,015                                   | 1,052,202        | 1,990                         | 1,444                                    | 17,036         |
| 1919.....               | 11,332            | 55,522                                      | 445,893           | 35,490                               | 25,730                        | 392,805                                   | 1,333,564        | 11,213                        | 1,609                                    | 7,911          |
| 1920.....               | 15,994            | 39,660                                      | 259,618           | 24,854                               | 35,577                        | 344,966                                   | 1,297,439        | 7,784                         | 1,672                                    | 35,809         |
| Year ending<br>June 30— | Wheat<br>flour.   | Wheat,<br>includ-<br>ing<br>wheat<br>flour. | Flax-<br>seed.    | Un-<br>manu-<br>factured<br>tobacco. | Flax.                         | Hemp.                                     | Hops.            | Jute<br>and<br>jute<br>butts. | Licorice<br>root.                        |                |
|                         | 1,000<br>barrels. | 1,000<br>bushels.                           | 1,000<br>bushels. | 1,000<br>pounds.                     | 1,000<br>long tons.           | 1,000<br>long tons.                       | 1,000<br>pounds. | 1,000<br>long tons.           | 1,000<br>pounds.                         |                |
| Average:                | 411               | 4,178                                       | 1,133             | 5,044                                | 1                             | 2   | 3                | 17                            | 1,373                                    |                |
| 1852-1856.....          | 411               | 4,178                                       | 1,133             | 5,044                                | 1                             | 2   | 3                | 17                            | 1,373                                    |                |
| 1857-1861.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    |                |
| 1862-1866.....          | .....             | .....                                       | .....             | .....                                | .....                         | .....                                     | .....            | .....                         | .....                                    |                |
| 1867-1871.....          | 104               | 1,818                                       | 1,037             | 5,631                                | .....                         | .....                                     | .....            | 15                            | 1,888                                    |                |
| 1872-1876.....          | 74                | 1,680                                       | 2,915             | 8,886                                | 4                             | 23  | .....            | 49                            | .....                                    |                |
| 1877-1881.....          | 7                 | 906   | 1,224             | 7,871                                | 4                             | 22  | .....            | 62                            | .....                                    |                |
| 1882-1886.....          | 2                 | 517   | 1,541             | 13,672                               | 6                             | 31  | 1,619            | 91                            | .....                                    |                |
| 1887-1891.....          | 3                 | 352   | 1,533             | 21,640                               | 7                             | 37  | 7,772            | 105                           | 59,275                                   |                |
| 1892-1896.....          | 1                 | 1,634                                       | 1,181             | 25,871                               | 7                             | 5   | 2,386            | 84                            | 88,445                                   |                |
| 1897-1901.....          | 1                 | 1,280                                       | 404               | 16,968                               | 7                             | 4   | 2,332            | 94                            | 87,476                                   |                |
| 1902-1906.....          | 27                | 993   | 234               | 33,805                               | 9                             | 5   | 5,206            | 102                           | 99,543                                   |                |
| 1907-1911.....          | 93                | 706   | 8,249             | 42,813                               | 10                            | 6   | 6,770            | 100                           | 96,111                                   |                |
| 1912-1916.....          | 150               | 2,996                                       | 9,227             | 55,556                               | 9                             | 7   | 5,839            | 106                           | 80,469                                   |                |

¹ Does not include oatmeal.

TABLE 388.—Imports of selected agricultural products, 1852-1920—Continued.

| Year ending<br>June 30— | Wheat<br>flour.   | Wheat,<br>including<br>wheat<br>flour. | Flax-<br>seed.    | Un-<br>manu-<br>factured<br>tobacco. | Flax.               | Hemp.               | Hops.            | Jute<br>and<br>jute<br>butts. | Licorice<br>root. |
|-------------------------|-------------------|--|-------------------|--------------------------------------|---------------------|---------------------|------------------|-------------------------------|-------------------|
|                         | 1,000<br>barrels. | 1,000<br>bushels.                      | 1,000<br>bushels. | 1,000<br>pounds.                     | 1,000<br>long tons. | 1,000<br>long tons. | 1,000<br>pounds. | 1,000<br>long tons.           | 1,000<br>pounds.  |
| 1901.....               | 1                 | 603                                    | 1,632             | 26,851                               | 7                   | 4                   | 2,607            | 103                           | 100,106           |
| 1902.....               | ( <sup>1</sup> )  | 121                                    | 1,477             | 29,429                               | 8                   | 6                   | 2,805            | 129                           | 109,077           |
| 1903.....               | 1                 | 1,080                                  | 129               | 34,017                               | 8                   | 5                   | 6,013            | 80                            | 88,581            |
| 1904.....               | 47                | 218                                    | 213               | 31,163                               | 10                  | 6                   | 2,758            | 97                            | 89,463            |
| 1905.....               | 41                | 3,286                                  | 296               | 33,288                               | 8                   | 4                   | 4,339            | 98                            | 106,444           |
| 1906.....               | 45                | 262                                    | 52                | 41,126                               | 9                   | 5                   | 10,114           | 104                           | 102,182           |
| 1907.....               | 48                | 590                                    | 90                | 40,899                               | 9                   | 9                   | 6,212            | 104                           | 66,116            |
| 1908.....               | 40                | 520                                    | 57                | 35,005                               | 10                  | 6                   | 8,493            | 108                           | 109,386           |
| 1909.....               | 92                | 457                                    | 594               | 43,123                               | 10                  | 5                   | 7,387            | 157                           | 97,743            |
| 1910.....               | 145               | 816                                    | 5,002             | 46,853                               | 13                  | 6                   | 3,201            | 68                            | 82,207            |
| 1911.....               | 142               | 1,147                                  | 10,499            | 48,203                               | 8                   | 5                   | 8,558            | 65                            | 125,135           |
| 1912.....               | 159               | 3,414                                  | 6,842             | 54,740                               | 11                  | 5                   | 2,991            | 101                           | 74,582            |
| 1913.....               | 108               | 1,282                                  | 5,294             | 67,977                               | 12                  | 8                   | 8,494            | 125                           | 105,116           |
| 1914.....               | 90                | 2,384                                  | 8,653             | 61,175                               | 10                  | 9                   | 5,382            | 106                           | 115,636           |
| 1915.....               | 64                | 715                                    | 10,666            | 45,809                               | 5                   | 5                   | 11,651           | 83                            | 65,959            |
| 1916.....               | 330               | 7,188                                  | 14,679            | 48,078                               | 7                   | 7                   | 676              | 108                           | 41,003            |
| 1917.....               | 175               | 24,925                                 | 12,394            | 49,105                               | 8                   | 10                  | 237              | 113                           | 59,400            |
| 1918.....               | 675               | 31,215                                 | 13,367            | 86,991                               | 6                   | 7                   | 121              | 78                            | 26,983            |
| Calendar year:          |                   |  |                   |                                      |                     |                     |                  |                               |                   |
| 1918.....               | 167               | 17,788                                 | 12,974            | 90,977                               | 8                   | 4                   | 77               | 71                            | 27,100            |
| 1919.....               | 17                | 7,996                                  | 14,036            | 85,986                               | 4                   | 2                   | 457              | 62                            | 49,882            |
| 1920.....               | 801               | 39,412                                 | 24,041            | 82,221                               | 7                   | 8                   | 5,949            | 96                            | 56,226            |

| Year ending<br>June 30— | Manila.             | Molasses.         | Olive oil,<br>for table<br>use. | Opium,<br>crude. | Potatoes.         | Rice and<br>rice flour,<br>rice meal,<br>and broken<br>rice. | Sisal<br>grass.     | Sugar,<br>raw and<br>refined. | Tea.             |
|-------------------------|---------------------|-------------------|---------------------------------|------------------|-------------------|--|---------------------|-------------------------------|------------------|
|                         | 1,000<br>long tons. | 1,000<br>gallons. | 1,000<br>gallons.               | 1,000<br>pounds. | 1,000<br>bushels. | 1,000<br>pounds.   | 1,000<br>long tons. | 1,000<br>pounds.              | 1,000<br>pounds. |
| Average:                | 12                  | 28,489            | 114                             | 407              | 407               | 407  | 407                 | 407                           | 407              |
| 1852-1856.....          | 12                  | 28,489            | 114                             | 407              | 407               | 407  | 407                 | 407                           | 407              |
| 1857-1861.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1862-1866.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1867-1871.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1872-1876.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1877-1881.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1882-1886.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1887-1891.....          | 16                  | 34,263            | 178                             | 129              | 252               | 70,893   | 1                   | 661,324                       | 26,150           |
| 1892-1896.....          | 47                  | 15,475            | 774                             | 529              | 1,805             | 180,808  | 50                  | 3,827,799                     | 92,772           |
| 1897-1901.....          | 47                  | 6,321             | 909                             | 568              | 495               | 165,232  | 70                  | 3,916,484                     | 85,809           |
| 1902-1906.....          | 61                  | 17,192            | 1,783                           | 538              | 2,662             | 150,914  | 97                  | 3,721,782                     | 98,678           |
| 1907-1911.....          | 67                  | 24,147            | 3,897                           | 490              | 1,907             | 215,892  | 102                 | 3,997,166                     | 96,743           |
| 1912-1916.....          | 64                  | 54,144            | 6,042                           | 399              | 3,638             | 250,775  | 180                 | 4,983,125                     | 98,841           |
| 1901.....               | 44                  | 11,453            | 983                             | 583              | 372               | 117,200  | 70                  | 3,975,006                     | 83,806           |
| 1902.....               | 56                  | 14,391            | 1,339                           | 534              | 7,656             | 157,659  | 90                  | 3,031,916                     | 75,579           |
| 1903.....               | 62                  | 17,240            | 1,494                           | 517              | 359               | 169,656  | 87                  | 4,216,108                     | 108,575          |
| 1904.....               | 66                  | 18,829            | 1,714                           | 573              | 3,167             | 154,222  | 109                 | 3,700,624                     | 112,906          |
| 1905.....               | 62                  | 19,478            | 1,923                           | 585              | 181               | 106,484  | 100                 | 3,680,933                     | 102,707          |
| 1906.....               | 59                  | 16,021            | 2,447                           | 469              | 1,948             | 166,548  | 98                  | 3,979,331                     | 93,622           |
| 1907.....               | 55                  | 24,631            | 3,450                           | 565              | 177               | 209,603  | 99                  | 4,391,840                     | 86,368           |
| 1908.....               | 52                  | 15,883            | 3,799                           | 286              | 404               | 212,783  | 104                 | 3,371,997                     | 94,150           |
| 1909.....               | 62                  | 22,093            | 4,129                           | 517              | 8,384             | 222,900  | 91                  | 4,189,421                     | 114,917          |
| 1910.....               | 93                  | 31,292            | 3,702                           | 449              | 353               | 225,401  | 100                 | 4,094,546                     | 85,626           |
| 1911.....               | 74                  | 23,838            | 4,406                           | 630              | 219               | 208,775  | 118                 | 3,937,978                     | 102,564          |
| 1912.....               | 69                  | 28,628            | 4,837                           | 400              | 13,735            | 190,063  | 114                 | 4,104,618                     | 101,407          |
| 1913.....               | 74                  | 38,927            | 5,221                           | 508              | 327               | 222,104  | 154                 | 4,740,041                     | 94,813           |
| 1914.....               | 50                  | 51,410            | 6,218                           | 455              | 3,646             | 300,195  | 216                 | 5,066,822                     | 91,181           |
| 1915.....               | 51                  | 70,840            | 6,711                           | 484              | 271               | 277,191  | 186                 | 5,420,982                     | 96,988           |
| 1916.....               | 79                  | 85,717            | 7,294                           | 147              | 210               | 264,324  | 229                 | 5,633,162                     | 109,866          |
| 1917.....               | 77                  | 110,238           | 7,583                           | 87               | 3,079             | 216,049  | 143                 | 5,332,746                     | 103,364          |
| 1918.....               | 86                  | 130,731           | 2,638                           | 158              | 1,180             | 456,069  | 150                 | 4,903,327                     | 151,315          |
| Calendar year:          |                     |                   |                                 |                  |                   |  |                     |                               |                  |
| 1918.....               | 79                  | 141,339           | 171                             | 160              | 1,201             | 558,048  | 152                 | 5,170,976                     | 134,418          |
| 1919.....               | 69                  | 120,156           | 9,024                           | 730              | 5,544             | 174,598  | 145                 | 7,023,630                     | 80,963           |
| 1920.....               | 67                  | 160,208           | 4,079                           | 211              | 6,062             | 142,951  | 181                 | 8,073,760                     | 80,247           |

<sup>1</sup> Less than 500

TABLE 388.—Imports of selected agricultural products, 1852-1920—Continued.

| Year ending June 30— | Beeswax.                          | Onions.        | Plums and prunes.           | Raisins.   | Currants.     | Dates.        | Figs.         |
|----------------------|-----------------------------------|----------------|-----------------------------|--|---------------|---------------|---------------|
|                      | 1,000 pounds.                     | 1,000 bushels. | 1,000 pounds.               | 1,000 pounds.                                      | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. |
| Average:             |                                   |                |                             |  |               |               |               |
| 1887-1891.....       | 129                               | .....          | 60,238                      | 38,546   | .....         | .....         | 9,784         |
| 1892-1896.....       | 280                               | .....          | 12,406                      | 17,746   | 34,398        | 14,914        | 10,117        |
| 1897-1901.....       | 265                               | 628            | 561                         | 7,670  | 27,520        | 15,654        | 8,920         |
| 1902-1906.....       | 457                               | 924            | 564                         | 7,345  | 35,457        | 25,649        | 14,335        |
| 1907-1911.....       | 846                               | 1,103          | .....                       | 5,283  | 35,259        | 26,059        | 19,848        |
| 1912-1916.....       | 1,406                             | 997            | .....                       | 2,845  | 30,350        | 29,922        | 16,564        |
| 1901.....            | 214                               | 774            | 746                         | 3,861  | 16,049        | 20,014        | 9,934         |
| 1902.....            | 409                               | 796            | 522                         | 6,684  | 36,239        | 21,681        | 11,087        |
| 1903.....            | 489                               | 926            | 634                         | 6,716  | 33,878        | 43,815        | 16,482        |
| 1904.....            | 425                               | 1,171          | 494                         | 6,868  | 38,348        | 21,058        | 13,176        |
| 1905.....            | 374                               | 856            | 672                         | 4,042  | 21,743        | 19,257        | 13,364        |
| 1906.....            | 588                               | 673            | 497                         | 12,415   | 37,078        | 22,436        | 17,562        |
| 1907.....            | 917                               | 1,126          | 323                         | 3,967  | 38,393        | 31,271        | 24,846        |
| 1908.....            | 672                               | 1,275          | 335                         | 9,132  | 38,653        | 24,058        | 18,337        |
| 1909.....            | 765                               | 575            | 296                         | 5,794  | 32,482        | 21,869        | 15,236        |
| 1910.....            | 972                               | 1,024          | .....                       | 5,043  | 33,326        | 22,694        | 17,362        |
| 1911.....            | 903                               | 1,515          | .....                       | 2,479  | 33,440        | 29,505        | 23,460        |
| 1912.....            | 1,077                             | 1,436          | .....                       | 3,256  | 33,151        | 25,208        | 18,765        |
| 1913.....            | 829                               | 789            | .....                       | 2,580  | 30,844        | 34,305        | 16,838        |
| 1914.....            | 1,412                             | 1,115          | .....                       | 4,555  | 32,033        | 34,074        | 19,285        |
| 1915.....            | 1,565                             | 829            | .....                       | 2,809  | 30,351        | 24,949        | 20,780        |
| 1916.....            | 2,146                             | 816            | .....                       | 1,024  | 25,373        | 31,075        | 7,153         |
| 1917.....            | 2,686                             | 1,758          | .....                       | 1,850  | 10,477        | 25,485        | 16,480        |
| 1918.....            | 1,827                             | 1,313          | .....                       | 844  | 5,168         | 5,573         | 10,473        |
| Calendar year:       |                                   |                |                             |  |               |               |               |
| 1918.....            | 1,558                             | 261            | .....                       | 100  | 5,091         | 10,721        | 11,775        |
| 1919.....            | 2,384                             | 741            | .....                       | 1,567  | 14,852        | 36,921        | 25,359        |
| 1920.....            | 4,143                             | 1,819          | .....                       | 46,039   | 55,832        | 32,347        | 31,437        |
| Year ending June 30— | Hides and skins, other than furs. |                |                             | Macaroni, vermicelli and all similar preparations. | Lemons.       | Oranges.      | Walnuts.      |
|                      | Cattle.                           | Goat.          | Other than cattle and goat. |  |               |               |               |
|                      | 1,000 pounds.                     | 1,000 pounds.  | 1,000 pounds.               | 1,000 pounds.                                      | 1,000 pounds. | 1,000 pounds. | 1,000 pounds. |
| Average:             |                                   |                |                             |  |               |               |               |
| 1887-1901.....       | .....                             | 68,053         | 91,173                      | .....  | .....         | .....         | .....         |
| 1902-1906.....       | 126,995                           | 93,675         | 115,952                     | .....  | 153,161       | 41,105        | .....         |
| 1907-1911.....       | 178,682                           | 94,330         | 143,351                     | 99,724   | 153,343       | 12,344        | 30,981        |
| 1912-1916.....       | 313,508                           | 88,711         | 188,388                     | 83,638   | 148,528       | 19,941        | 34,275        |
| 1901.....            | 129,175                           | 73,746         | 77,990                      | .....  | 148,515       | 50,333        | .....         |
| 1902.....            | 148,628                           | 85,039         | 89,458                      | .....  | 164,075       | 52,742        | .....         |
| 1903.....            | 131,644                           | 85,114         | 102,340                     | 28,788   | 152,004       | 56,672        | 12,363        |
| 1904.....            | 85,370                            | 86,339         | 108,025                     | 40,224   | 171,923       | 35,893        | 23,671        |
| 1905.....            | 113,177                           | 97,804         | 126,894                     | 53,441   | 139,084       | 28,881        | 21,684        |
| 1906.....            | 156,155                           | 111,097        | 158,045                     | 77,926   | 138,717       | 31,134        | 24,917        |
| 1907.....            | 134,671                           | 101,202        | 135,111                     | 87,721   | 157,860       | 21,267        | 32,598        |
| 1908.....            | 98,353                            | 63,641         | 120,771                     | 97,234   | 178,490       | 18,397        | 26,887        |
| 1909.....            | 192,252                           | 104,048        | 148,254                     | 85,114   | 135,184       | 8,436         | 26,153        |
| 1910.....            | 318,004                           | 115,845        | 174,771                     | 113,773  | 160,215       | 4,676         | 33,641        |
| 1911.....            | 150,128                           | 86,914         | 137,850                     | 114,779  | 134,969       | 7,672         | 33,619        |
| 1912.....            | 251,013                           | 95,341         | 191,415                     | 108,231  | 145,639       | 7,629         | 37,214        |
| 1913.....            | 268,042                           | 96,250         | 207,904                     | 106,501  | 151,416       | 12,253        | 26,662        |
| 1914.....            | 279,963                           | 84,759         | 196,348                     | 126,129  | .....         | .....         | 37,106        |
| 1915.....            | 334,341                           | 66,547         | 137,439                     | 56,542   | .....         | .....         | 33,446        |
| 1916.....            | 434,178                           | 100,657        | 208,835                     | 21,790   | .....         | .....         | 36,859        |
| 1917.....            | 386,600                           | 105,640        | 207,967                     | 3,473  | .....         | .....         | 38,725        |
| 1918.....            | 267,500                           | 66,983         | 98,084                      | 670  | .....         | .....         | 23,289        |
| Calendar year:       |                                   |                |                             |  |               |               |               |
| 1918.....            | 221,051                           | 62,364         | 78,476                      | 402  | .....         | .....         | 13,011        |
| 1919.....            | 407,282                           | 133,657        | 203,897                     | 903  | .....         | .....         | 31,496        |
| 1920.....            | 275,325                           | 80,205         | 154,710                     | 805  | .....         | .....         | 31,891        |

<sup>1</sup> Two years, 1912-13.



TABLE 389.—Exports and imports of selected forest products, 1852-1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. Where figures are lacking, either there were no exports or imports, or they were not separately classified for publication.]

| Year ending<br>June 30— | Domestic exports.                                |                  |                   |                                |                                       | Imports.                |                           |  |                |                  |                        |
|-------------------------|--|------------------|-------------------|--------------------------------|---------------------------------------|-------------------------|---------------------------|--|----------------|------------------|------------------------|
|                         | Lumber.  |                  | Rosin.            | Spirits<br>of tur-<br>pentine. | Tim-<br>ber,<br>hewn<br>and<br>sawed. | Cam-<br>phor,<br>crude. | Rubber<br>gums,<br>total. | Lumber.  |                | Shellac.         | Wood<br>pulp.          |
|                         | Boards,<br>deals,<br>and<br>planks. <sup>1</sup> | Staves.          |                   |                                |                                       |                         |                           | Boards,<br>deals,<br>planks,<br>and<br>other<br>sawed. | Shin-<br>gles. |                  |                        |
|                         | 1,000<br>M feet.                                 | 1,000<br>number. | 1,000<br>barrels. | 1,000<br>gallons.              | 1,000<br>M feet.                      | 1,000<br>pounds.        | 1,000<br>pounds.          | 1,000<br>M feet.                                       | 1,000<br>M.    | 1,000<br>pounds. | 1,000<br>long<br>tons. |
| Average:                |  |                  |                   |                                |                                       |                         |                           |  |                |                  |                        |
| 1851-1856 ..            | 129  | .....            | 552               | 1,369                          | .....                                 | 214                     | .....                     | .....  | .....          | .....            | .....                  |
| 1857-1861 ..            | 205  | .....            | 684               | 2,735                          | .....                                 | 361                     | .....                     | .....  | .....          | .....            | .....                  |
| 1862-1866 ..            | 138  | .....            | 69                | 102                            | .....                                 | 387                     | .....                     | .....  | .....          | 634              | .....                  |
| 1867-1871 ..            | 139  | .....            | 492               | 2,693                          | .....                                 | .....                   | 2,739                     | .....  | .....          | .....            | .....                  |
| 1872-1876 ..            | 222  | .....            | 846               | .....                          | 210                                   | .....                   | 12,681                    | 565  | 88             | .....            | .....                  |
| 1877-1881 ..            | 303  | .....            | .....             | 7,139                          | 220                                   | 1,516                   | 15,611                    | 418  | 55             | .....            | .....                  |
| 1882-1886 ..            | 434  | .....            | 1,290             | 9,302                          | 164                                   | 1,959                   | 24,481                    | 578  | 88             | .....            | .....                  |
| 1887-1891 ..            | 532  | .....            | 1,534             | 10,794                         | 296                                   | 2,274                   | 33,227                    | 647  | 184            | 5,086            | 37                     |
| 1892-1896 ..            | 616  | .....            | 2,006             | 14,269                         | 336                                   | 1,492                   | 39,672                    | 661  | .....          | 5,848            | 43                     |
| 1897-1901 ..            | 957  | .....            | 2,478             | 18,349                         | 491                                   | 1,858                   | 52,975                    | 566  | .....          | 8,839            | 47                     |
| 1902-1906 ..            | 212  | 51,234           | 2,463             | 16,927                         | 556                                   | 2,139                   | 75,909                    | 727  | 772            | 11,614           | 121                    |
| 1907-1911 ..            | 1,649  | 56,182           | 2,356             | 16,669                         | 521                                   | 2,939                   | 121,504                   | 900  | 867            | 19,046           | 319                    |
| 1912-1916 ..            | 1,914  | 66,431           | 2,128             | 5,674                          | 353                                   | 3,529                   | 201,759                   | 1,016  | 1,045          | 21,470           | 517                    |
| 1901 ..                 | 1,102  | 47,363           | 2,821             | 20,241                         | 590                                   | 2,176                   | 64,927                    | 491  | 556            | 9,609            | 47                     |
| 1902 ..                 | 943  | 46,999           | 2,536             | 19,178                         | 477                                   | 1,831                   | 67,790                    | 666  | 708            | 9,065            | 67                     |
| 1903 ..                 | 1,066  | 55,879           | 2,396             | 16,379                         | 570                                   | 2,472                   | 69,312                    | 721  | 724            | 11,591           | 117                    |
| 1904 ..                 | 1,427  | 47,420           | 2,585             | 17,203                         | 604                                   | 2,820                   | 74,328                    | 589  | 770            | 10,933           | 145                    |
| 1905 ..                 | 1,283  | 48,286           | 2,310             | 15,895                         | 533                                   | 1,904                   | 87,004                    | 711  | 759            | 10,701           | 168                    |
| 1906 ..                 | 1,344  | 57,586           | 2,439             | 15,981                         | 595                                   | 1,669                   | 81,109                    | 950  | 901            | 15,780           | 157                    |
| 1907 ..                 | 1,624  | 51,120           | 2,561             | 15,855                         | 640                                   | 3,138                   | 106,748                   | 934  | 881            | 17,786           | 213                    |
| 1908 ..                 | 1,543  | 61,697           | 2,713             | 19,533                         | 522                                   | 2,814                   | 85,810                    | 791  | 988            | 13,362           | 238                    |
| 1909 ..                 | 1,358  | 52,583           | 2,170             | 17,502                         | 419                                   | 1,990                   | 114,599                   | 846  | 1,058          | 16,185           | 274                    |
| 1910 ..                 | 1,684  | 49,784           | 2,144             | 15,588                         | 491                                   | 3,007                   | 154,621                   | 1,054  | 763            | 29,402           | 378                    |
| 1911 ..                 | 2,032  | 65,728           | 2,190             | 14,818                         | 532                                   | 3,728                   | 145,744                   | 872  | 643            | 15,495           | 492                    |
| 1912 ..                 | 2,307  | 64,163           | 2,474             | 19,599                         | 438                                   | 2,155                   | 175,966                   | 905  | 515            | 18,746           | 478                    |
| 1913 ..                 | 2,550  | 89,006           | 2,806             | 21,094                         | 512                                   | 3,709                   | 170,747                   | 1,091  | 560            | 21,912           | 503                    |
| 1914 ..                 | 2,405  | 77,151           | 2,418             | 18,901                         | 441                                   | 3,477                   | 161,777                   | 929  | 895            | 16,720           | 508                    |
| 1915 ..                 | 1,129  | 39,297           | 1,372             | 9,464                          | 174                                   | 3,720                   | 106,122                   | 939  | 1,487          | 24,153           | 538                    |
| 1916 ..                 | 1,177  | 57,538           | 1,571             | 9,310                          | 201                                   | 4,574                   | 304,183                   | 1,218  | 1,769          | 25,818           | 507                    |
| 1917 ..                 | 1,042  | 61,469           | 1,639             | 8,842                          | 184                                   | 6,885                   | 364,914                   | 1,175  | 1,924          | 32,540           | 699                    |
| 1918 ..                 | 1,068  | 63,207           | 1,071             | 5,095                          | 106                                   | 3,638                   | 414,984                   | 1,283  | 1,878          | 22,913           | 504                    |
| Calendar year:          |  |                  |                   |                                |                                       |                         |                           |  |                |                  |                        |
| 1918 ..                 | 1,024  | 53,374           | 779               | 3,717                          | 75                                    | 3,474                   | 340,023                   | 1,209  | 1,798          | 18,664           | 516                    |
| 1919 ..                 | 1,311  | 81,658           | 1,210             | 10,672                         | 183                                   | 2,694                   | 565,931                   | 1,149  | 1,987          | 24,426           | 568                    |
| 1920 ..                 | 1,551  | 82,584           | 1,164             | 9,458                          | 171                                   | 3,833                   | 590,464                   | 1,351  | 1,964          | 28,537           | 809                    |

<sup>1</sup> Including "Joists and scantling" prior to 1884.<sup>2</sup> Includes "Gutta-percha" only for 1867.

TABLE 390.—Trade of the United States with Hawaii and Porto Rico in selected domestic farm products, 1918-1920.

[These shipments are not included in the domestic exports from or imports into the United States.]

## SHIPMENTS FROM THE UNITED STATES.

| Article.                   | Hawaii.              |              |              | Porto Rico.  |               |               |
|----------------------------|----------------------|--------------|--------------|--------------|---------------|---------------|
|                            | Year ending Dec. 31— |              |              |              |               |               |
|                            | 1918                 | 1919         | 1920         | 1918         | 1919          | 1920          |
| Beans and dried peas       |                      |              |              |              |               |               |
| .....bushels..             | 8, 539               | 10, 558      | 17, 142      | 207, 422     | 363, 738      | 495, 385      |
| Dairy products...pounds..  | 3, 575, 998          | 5, 054, 231  | 6, 045, 552  | 5, 584, 422  | 5, 392, 805   | 9, 272, 439   |
| Rice.....do.....           | 7, 555, 857          | 15, 575, 417 | 17, 192, 467 | 82, 263, 122 | 163, 949, 679 | 153, 820, 633 |
| Sugar, refined.....do..... | 176, 011             | 1, 102, 075  | 2, 920, 531  | 194, 926     | 306, 232      | 3, 382, 458   |
| Tobacco, unmanufactured    |                      |              |              |              |               |               |
| .....pounds..              | -----                | -----        | -----        | 1, 143, 793  | 303, 638      | 7, 391, 691   |

## SHIPMENTS TO THE UNITED STATES.

|                                     |               |               |               |             |             |             |
|-------------------------------------|---------------|---------------|---------------|-------------|-------------|-------------|
| Coffee.....pounds.....              | 4,485,343     | 3,144,351     | 1,885,703     | 292,879     | 667,318     | 418,127     |
| Grapefruit.....boxes.....           |               |               |               | 445,083     | 401,174     | 412,644     |
| Molasses and sirup.....gallons..... | 12,492,061    | 9,882,567     | 12,126,132    | 14,071,657  | 15,554,493  | 20,770,640  |
| Oranges.....boxes.....              |               |               |               | 509,020     | 355,226     | 256,387     |
| Sugar, raw.....pounds.....          | 1,009,749,843 | 1,158,904,433 | 1,099,627,131 | 301,329,419 | 728,391,050 | 826,108,162 |

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920.

| Article and country to which consigned.           | Quantity.            |                |                | Per cent of total.   |               |               |
|---|----------------------|----------------|----------------|----------------------|---------------|---------------|
|   | Year ending Dec. 31— |                |                | Year ending Dec. 31— |               |               |
|   | 1918                 | 1919           | 1920           | 1918                 | 1919          | 1920          |
| <b>ANIMAL MATTER.</b>                             |                      |                |                |                      |               |               |
| <b>Cattle:</b>                                    | <i>Number.</i>       | <i>Number.</i> | <i>Number.</i> | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Belgium.....                                      |                      | 9,067          | 29,300         |                      | 13.0          | 34.3          |
| Canada.....                                       | 7,314                | 11,192         | 4,624          | 42.3                 | 16.0          | 5.4           |
| Cuba.....   | 1,333                | 13,943         | 20,766         | 7.7                  | 20.0          | 24.3          |
| Mexico.....                                       | 7,885                | 23,923         | 27,758         | 45.6                 | 34.2          | 32.5          |
| United Kingdom.....                               |                      |                | 100            |                      |               | .1            |
| Other countries.....                              | 748                  | 11,734         | 2,754          | 4.4                  | 16.8          | 3.4           |
| Total.....  | 17,280               | 69,859         | 85,302         | 100.0                | 100.0         | 100.0         |
| <b>Horses:</b>                                    |                      |                |                |                      |               |               |
| Belgium.....                                      |                      | 1,069          | 103            |                      | 5.4           | .7            |
| Canada.....                                       | 13,032               | 9,348          | 7,062          | 25.5                 | 50.0          | 49.2          |
| Cuba.....   | 2,930                | 737            | 2,200          | 5.7                  | 3.7           | 15.3          |
| Mexico.....                                       | 749                  | 5,438          | 3,285          | 1.5                  | 27.6          | 22.9          |
| United Kingdom.....                               | 33,547               | 98             | 356            | 65.6                 | .5            | 2.5           |
| Other countries.....                              | 912                  | 2,501          | 1,332          | 1.7                  | 12.8          | 9.4           |
| Total.....  | 51,170               | 19,691         | 14,338         | 100.0                | 100.0         | 100.0         |
| <b>Butter:</b>                                    | <i>Pounds.</i>       | <i>Pounds.</i> | <i>Pounds.</i> |                      |               |               |
| Belgium.....                                      | 40,000               | 2,556,293      | 5,214,778      | .2                   | 8.3           | 29.8          |
| Canada.....                                       | 12,518               | 274,893        | 855,150        | .1                   | .8            | 4.9           |
| Central American States and British Honduras..... | 521,152              | 666,713        | 861,781        | 2.0                  | 1.9           | 4.9           |
| Mexico.....                                       | 313,615              | 429,608        | 798,596        | 1.2                  | 1.2           | 4.6           |
| United Kingdom.....                               | 22,250,115           | 21,817,613     | 3,398,845      | 84.9                 | 63.1          | 22.3          |
| Venezuela.....                                    | 2,970                | 35,563         | 25,170         | (1)                  | .1            | .1            |
| West Indies and Bermuda.....                      | 1,775,416            | 2,249,201      | 2,878,808      | 6.8                  | 6.5           | 10.5          |
| Other countries.....                              | 1,278,629            | 6,226,601      | 2,954,607      | 4.8                  | 13.1          | 16.9          |
| Total.....  | 26,194,415           | 34,556,485     | 17,487,735     | 100.0                | 100.0         | 100.0         |

Less than 0.05 of 1 per cent.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

| Article and country to which consigned. | Quantity.            |                |                | Per cent of total.   |               |               |
|---|----------------------|----------------|----------------|----------------------|---------------|---------------|
|   | Year ending Dec. 31— |                |                | Year ending Dec. 31— |               |               |
|   | 1918                 | 1919           | 1920           | 1918                 | 1919          | 1920          |
| <b>ANIMAL MATTER—continued.</b>         |                      |                |                |                      |               |               |
| <b>Beef, canned:</b>                    | <i>Pounds.</i>       | <i>Pounds.</i> | <i>Pounds.</i> | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Danzig and Poland.....                  |                      |                | 16,722,800     |                      |               | 70.4          |
| United Kingdom.....                     | 51,250,973           | 13,947,951     | 1,795,554      | 36.2                 | 25.9          | 7.6           |
| Other countries.....                    | 90,206,190           | 39,919,376     | 5,247,646      | 63.8                 | 74.1          | 22.0          |
| Total.....                              | 141,457,163          | 53,867,327     | 23,766,000     | 100.0                | 100.0         | 100.0         |
| <b>Beef, fresh:</b>                     |                      |                |                |                      |               |               |
| Belgium.....                            | 105,600              | 23,469,602     | 35,205,492     | (1)                  | 13.5          | 39.3          |
| Germany.....                            |                      | 31,083,572     | 26,159,680     |                      | 17.8          | 29.2          |
| Italy.....                              | 8,877,471            | 21,375,475     | 211,447        | 1.7                  | 12.3          | 2             |
| Netherlands.....                        |                      | 13,708,452     | 15,922,196     |                      | 7.9           | 17.8          |
| Panama.....                             | 357,366              | 51,950         | 86,537         | 1                    | (1)           | 1             |
| United Kingdom.....                     | 466,080,785          | 73,073,602     | 5,699,438      | 90.6                 | 41.9          | 6.4           |
| Other countries.....                    | 38,920,907           | 11,664,346     | 6,364,308      | 7.6                  | 6.6           | 7.0           |
| Total.....                              | 514,341,529          | 174,426,999    | 89,649,148     | 100.0                | 100.0         | 100.0         |
| <b>Beef, pickled and other cured:</b>   |                      |                |                |                      |               |               |
| Canada.....                             | 2,044,979            | 1,373,553      | 2,016,022      | 4.6                  | 3.2           | 7.8           |
| Germany.....                            |                      | 2,557,542      | 1,604,050      |                      | 6.0           | 6.2           |
| Netherlands.....                        |                      | 2,325,743      | 1,700,784      |                      | 5.4           | 6.6           |
| Newfoundland and Labrador.....          | 5,418,221            | 5,676,761      | 5,596,298      | 12.3                 | 13.3          | 21.7          |
| United Kingdom.....                     | 3,228,816            | 5,569,743      | 4,210,631      | 7.3                  | 13.0          | 16.3          |
| West Indies and Bermuda.....            | 1,690,183            | 1,404,620      | 3,764,361      | 3.8                  | 3.3           | 14.6          |
| Other countries.....                    | 31,823,821           | 23,886,757     | 6,879,030      | 72.0                 | 55.8          | 26.8          |
| Total.....                              | 44,206,020           | 42,804,724     | 25,771,176     | 100.0                | 100.0         | 100.0         |
| <b>Oleo oil:</b>                        |                      |                |                |                      |               |               |
| Denmark.....                            | 30,000               | 8,025,918      | 1,531,297      | (1)                  | 10.6          | 2.1           |
| Germany.....                            |                      | 2,126,704      | 3,423,958      |                      | 2.8           | 4.6           |
| Greece.....                             | 946,517              | 3,479,879      | 2,706,173      | 1.4                  | 4.6           | 3.6           |
| Netherlands.....                        |                      | 4,811,612      | 20,107,202     |                      | 6.4           | 27.0          |
| Norway.....                             |                      | 8,656,192      | 10,566,827     |                      | 11.5          | 14.2          |
| Sweden.....                             | 2,240,000            | 3,494,255      | 3,320,805      | 3.2                  | 4.6           | 4.5           |
| Turkey in Europe.....                   |                      | 2,635,801      | 6,801,573      |                      | 3.5           | 9.1           |
| United Kingdom.....                     | 57,783,111           | 20,791,549     | 17,593,177     | 33.6                 | 27.5          | 23.7          |
| Other countries.....                    | 8,106,722            | 21,563,254     | 8,312,332      | 11.8                 | 28.5          | 11.2          |
| Total.....                              | 69,106,350           | 75,585,164     | 74,368,344     | 100.0                | 100.0         | 100.0         |
| <b>Lard compounds:</b>                  |                      |                |                |                      |               |               |
| Cuba.....                               | 8,608,423            | 8,611,137      | 6,918,040      | 19.6                 | 6.9           | 21.6          |
| Mexico.....                             | 6,886,888            | 4,620,050      | 6,217,160      | 15.7                 | 3.7           | 19.4          |
| United Kingdom.....                     | 4,345,867            | 62,739,201     | 4,008,562      | 9.9                  | 50.2          | 12.5          |
| Other countries.....                    | 21,136,232           | 48,992,562     | 14,907,696     | 54.8                 | 39.2          | 46.5          |
| Total.....                              | 43,977,410           | 124,962,950    | 32,051,458     | 100.0                | 100.0         | 100.0         |
| <b>Bacon:</b>                           |                      |                |                |                      |               |               |
| Belgium.....                            | 67,444,015           | 90,823,427     | 35,086,345     | 6.1                  | 7.6           | 5.5           |
| Canada.....                             | 24,454,474           | 34,253,197     | 12,473,768     | 2.1                  | 2.9           | 2.0           |
| Cuba.....                               | 16,101,208           | 15,956,981     | 21,190,518     | 1.5                  | 1.3           | 3.3           |
| Denmark.....                            |                      | 39,039,833     | 6,642,344      |                      | 3.3           | 1.0           |
| France.....                             | 98,496,402           | 178,431,224    | 25,040,866     | 8.9                  | 15.0          | 3.9           |
| Germany.....                            |                      | 53,449,664     | 76,035,297     |                      | 4.5           | 11.9          |
| Italy.....                              | 98,079,060           | 45,128,149     | 15,844,911     | 8.9                  | 4.0           | 3.0           |
| Netherlands.....                        |                      | 112,028,898    | 61,759,287     |                      | 9.4           | 9.7           |
| Norway.....                             |                      | 25,152,222     | 6,790,290      |                      | 2.2           | 1.1           |
| Sweden.....                             | 1,680,601            | 51,891,124     | 17,410,673     | 2                    | 4.4           | 2.7           |
| United Kingdom.....                     | 788,253,473          | 507,184,219    | 344,555,982    | 71.4                 | 42.6          | 54.1          |
| Other countries.....                    | 9,278,843            | 32,958,476     | 10,875,311     | 9                    | 2.8           | 1.8           |
| Total.....                              | 1,104,788,081        | 1,190,297,494  | 636,675,572    | 100.0                | 100.0         | 100.0         |

<sup>1</sup> Less than 0.05 of 1 per cent.

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920—Continued.

| Article and country to which consigned. | Quantity.            |                |                | Per cent of total.   |               |               |
|---|----------------------|----------------|----------------|----------------------|---------------|---------------|
|   | Year ending Dec. 31— |                |                | Year ending Dec. 31— |               |               |
|   | 1918                 | 1919           | 1920           | 1918                 | 1919          | 1920          |
| <b>ANIMAL MATTER—continued.</b>         |                      |                |                |                      |               |               |
| <b>Hams and shoulders, cured:</b>       | <i>Pounds.</i>       | <i>Pounds.</i> | <i>Pounds.</i> | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Belgium.....                            | 5,853,423            | 30,054,740     | 6,596,959      | 1.1                  | 5.0           | 3.6           |
| Canada.....                             | 11,112,784           | 7,457,307      | 6,354,128      | 2.1                  | 1.2           | 3.4           |
| Cuba.....                               | 8,707,061            | 9,863,108      | 15,612,842     | 1.6                  | 1.7           | 8.4           |
| France.....                             | 30,339,839           | 103,201,727    | 26,209,164     | 5.6                  | 17.3          | 14.1          |
| Italy.....                              | 7,102,044            | 65,245,793     | 3,236,225      | 1.3                  | 10.9          | 1.7           |
| United Kingdom.....                     | 470,415,228          | 338,028,382    | 116,256,553    | 87.6                 | 56.6          | 62.8          |
| Other countries.....                    | 3,685,672            | 42,944,611     | 10,981,384     | .7                   | 7.3           | 6.0           |
| Total.....                              | 537,213,041          | 596,795,663    | 185,246,755    | 100.0                | 100.0         | 100.0         |
| <b>Lard:</b>                            |                      |                |                |                      |               |               |
| Belgium.....                            | 116,784,152          | 155,802,228    | 55,021,415     | 21.3                 | 20.5          | 9.0           |
| Canada.....                             | 2,478,926            | 5,090,459      | 12,730,298     | .5                   | .7            | 2.1           |
| Cuba.....                               | 46,008,414           | 44,766,460     | 65,720,975     | 8.4                  | 5.9           | 10.7          |
| Denmark.....                            | 75,000               | 33,505,333     | 6,329,275      | (1)                  | 4.4           | 1.0           |
| Ecuador.....                            | 1,339,946            | 2,407,180      | 2,897,992      | .2                   | .3            | .5            |
| France.....                             | 35,841,676           | 96,296,935     | 48,755,791     | 6.5                  | 12.7          | 8.0           |
| Germany.....                            |                      | 39,495,017     | 127,836,008    |                      | 5.2           | 20.9          |
| Italy.....                              | 1,145,112            | 2,463,197      | 23,153,676     | .2                   | .3            | 3.8           |
| Mexico.....                             | 15,452,095           | 7,134,448      | 17,302,006     | 2.8                  | .9            | 2.8           |
| Netherlands.....                        |                      | 68,596,924     | 91,287,867     |                      | 9.0           | 14.9          |
| Peru.....                               | 1,080,095            | 944,742        | 2,413,735      | .2                   | .1            | .4            |
| Sweden.....                             | 560,295              | 24,483,987     | 5,000,274      | .1                   | 3.2           | .8            |
| Switzerland.....                        | 12,609,344           | 32,247,743     | 1,912,574      | 2.3                  | 4.2           | .3            |
| United Kingdom.....                     | 309,987,044          | 219,306,542    | 128,771,843    | 56.5                 | 28.8          | 21.0          |
| Other countries.....                    | 5,455,802            | 28,380,466     | 28,106,222     | 1.0                  | 3.8           | 3.8           |
| Total.....                              | 548,817,901          | 780,901,611    | 612,249,951    | 100.0                | 100.0         | 100.0         |
| <b>Lard, neutral:</b>                   |                      |                |                |                      |               |               |
| Denmark.....                            |                      | 5,445,681      | 497,480        |                      | 23.7          | 2.1           |
| Germany.....                            |                      | 950,837        | 118,584        |                      | 4.1           | .5            |
| Netherlands.....                        |                      | 9,313,883      | 2,998,410      |                      | 40.6          | 12.9          |
| Norway.....                             |                      | 1,653,325      | 1,885,917      |                      | 7.2           | 8.1           |
| United Kingdom.....                     | 5,483,851            | 2,000,074      | 14,255,712     | 86.2                 | 8.7           | 61.3          |
| Other countries.....                    | 873,313              | 3,593,337      | 3,481,968      | 13.8                 | 15.7          | 15.1          |
| Total.....                              | 6,307,164            | 22,957,137     | 23,238,071     | 100.0                | 100.0         | 100.0         |
| <b>Pork, pickled:</b>                   |                      |                |                |                      |               |               |
| British Guiana.....                     | 1,040,430            | 205,700        | 901,185        | 2.8                  | .6            | 2.3           |
| Canada.....                             | 14,708,735           | 8,372,790      | 15,480,971     | 40.1                 | 24.5          | 40.0          |
| Cuba.....                               | 7,659,439            | 6,500,984      | 4,775,388      | 20.9                 | 19.2          | 12.3          |
| Haiti.....                              | 739,655              | 404,678        | 988,990        | 2.0                  | 1.4           | 2.5           |
| Newfoundland and Labrador.....          | 6,305,799            | 4,333,214      | 4,848,954      | 17.2                 | 14.2          | 12.5          |
| Panama.....                             | 132,720              | 124,633        | 240,872        | .4                   | .4            | .6            |
| United Kingdom.....                     | 2,102,744            | 3,373,871      | 1,602,869      | 5.7                  | 9.9           | 4.9           |
| Other countries.....                    | 3,981,138            | 10,172,949     | 9,569,606      | 10.9                 | 28.8          | 24.9          |
| Total.....                              | 36,671,680           | 34,112,875     | 38,708,841     | 100.0                | 100.0         | 100.0         |
| <b>VEGETABLE MATTER.</b>                |                      |                |                |                      |               |               |
| <b>Cotton:</b>                          |                      |                |                |                      |               |               |
| Austria-Hungary.....                    |                      | 48,609,352     | * 2,880,580    |                      | 1.4           | .1            |
| Belgium.....                            |                      | 81,894,821     | 100,905,512    |                      | 2.4           | 3.1           |
| Canada.....                             | 148,561,448          | 83,405,725     | 110,328,914    | 7.0                  | 2.5           | 3.5           |
| France.....                             | 289,714,337          | 398,188,968    | 334,480,950    | 13.7                 | 11.8          | 10.5          |
| Germany.....                            |                      | 77,914,351     | 378,071,268    |                      | 2.3           | 11.8          |
| Italy.....                              | 194,528,036          | 280,849,977    | 282,851,308    | 9.2                  | 8.3           | 8.9           |
| Japan.....                              | 299,728,224          | 440,520,341    | 335,994,543    | 14.2                 | 13.1          | 10.6          |
| Mexico.....                             | 1,992,554            | 345,852        | 28,970,192     | .1                   | (1)           | .8            |
| Netherlands.....                        |                      | 105,261,030    | 44,457,873     |                      | 3.1           | 1.4           |
| Russia, European.....                   |                      | 155,015        |                |                      | (1)           |               |
| Spain.....                              | 122,197,270          | 128,076,028    | 145,027,632    | 5.8                  | 3.7           | 4.6           |
| Sweden.....                             | 16,550,343           | 43,099,176     | 44,055,629     | .8                   | 1.3           | 1.4           |
| United Kingdom.....                     | 997,886,017          | 1,619,088,787  | 1,903,996,422  | 47.1                 | 48.1          | 41.0          |
| Other countries.....                    | 47,036,953           | 62,288,762     | 74,472,513     | 2.1                  | 2.0           | 2.3           |
| Total.....                              | 2,118,175,182        | 3,367,677,985  | 3,179,313,336  | 100.0                | 100.0         | 100.0         |

\* Less than 0.05 of 1 per cent.

\* Austria, only.

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920—Continued.

| Article and country to which consigned. | Quantity.            |                 |                 | Per cent of total.   |                  |                  |
|---|----------------------|-----------------|-----------------|----------------------|------------------|------------------|
|   | Year ending Dec. 31— |                 |                 | Year ending Dec. 31— |                  |                  |
|   | 1918                 | 1919            | 1920            | 1918                 | 1919             | 1920             |
| <b>VEGETABLE MATTER—continued.</b>      |                      |                 |                 |                      |                  |                  |
| <b>Fruits:</b>                          |                      |                 |                 |                      |                  |                  |
| Apples, dried—                          | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  | <i>P. ct.</i>        | <i>P. ct.</i>    | <i>P. ct.</i>    |
| Denmark.....                            | 190,700              | 3,512,038       | 893,514         | 8.7                  | 14.2             | 10.1             |
| France.....                             | 124,700              | 1,625,439       | 700,671         | 5.7                  | 6.6              | 7.9              |
| Germany.....                            |                      | 10,759          | 43,258          |                      | ( <sup>1</sup> ) | .5               |
| Netherlands.....                        |                      | 490,503         | 1,283,225       |                      | 2.0              | 14.5             |
| Sweden.....                             | 185                  | 7,309,782       | 1,479,766       | ( <sup>1</sup> )     | 29.6             | 16.8             |
| Other countries.....                    | 1,884,898            | 11,755,838      | 4,427,372       | 85.6                 | 47.6             | 50.2             |
| Total.....                              | 2,200,483            | 24,704,359      | 8,827,806       | 100.0                | 100.0            | 100.0            |
| Apples, fresh—                          | <i>Barrels.</i>      | <i>Barrels.</i> | <i>Barrels.</i> |                      |                  |                  |
| Canada.....                             | 331,463              | 158,859         | 274,358         | 57.2                 | 9.3              | 15.3             |
| Germany.....                            |                      | 8               | 50              |                      | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| United Kingdom.....                     | 125,987              | 1,209,855       | 1,250,033       | 21.7                 | 70.7             | 69.5             |
| Other countries.....                    | 122,476              | 343,645         | 273,270         | 21.1                 | 20.0             | 15.2             |
| Total.....                              | 579,916              | 1,712,367       | 1,797,711       | 100.0                | 100.0            | 100.0            |
| Apricots, dried—                        | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  |                      |                  |                  |
| Belgium.....                            | 260                  | 1,921,532       | 344,828         | ( <sup>1</sup> )     | 5.2              | 3.5              |
| Canada.....                             | 1,809,357            | 724,844         | 783,065         | 34.4                 | 2.0              | 7.9              |
| Denmark.....                            | 139,852              | 5,979,190       | 954,522         | 2.7                  | 16.1             | 9.7              |
| France.....                             | 365,100              | 8,328,363       | 1,821,002       | 6.9                  | 22.4             | 18.4             |
| Germany.....                            |                      | 30,473          | 28,465          |                      | .1               | .3               |
| Netherlands.....                        |                      | 1,140,230       | 150,260         |                      | 3.1              | 1.5              |
| United Kingdom.....                     | 1,169,333            | 7,633,498       | 4,256,638       | 22.2                 | 20.6             | 43.1             |
| Other countries.....                    | 1,778,314            | 11,385,694      | 1,542,473       | 33.8                 | 30.5             | 15.6             |
| Total.....                              | 5,262,206            | 37,143,824      | 9,881,256       | 100.0                | 100.0            | 100.0            |
| Oranges—                                | <i>Boxes.</i>        | <i>Boxes.</i>   | <i>Boxes.</i>   |                      |                  |                  |
| Canada.....                             | 827,529              | 1,633,421       | 1,417,001       | 96.5                 | 91.9             | 93.3             |
| Other countries.....                    | 29,630               | 144,047         | 100,993         | 3.5                  | 8.1              | 6.7              |
| Total.....                              | 857,159              | 1,777,468       | 1,517,994       | 100.0                | 100.0            | 100.0            |
| Prunes—                                 | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  |                      |                  |                  |
| Belgium.....                            | 150                  | 3,173,934       | 2,095,419       | ( <sup>1</sup> )     | 2.9              | 2.8              |
| Canada.....                             | 12,772,178           | 14,519,219      | 14,903,218      | 55.8                 | 13.4             | 19.8             |
| Denmark.....                            | 481,850              | 12,206,192      | 1,456,849       | 2.1                  | 11.3             | 1.9              |
| France.....                             | 746,469              | 10,498,370      | 16,184,922      | 3.3                  | 9.7              | 21.5             |
| Germany.....                            |                      | 15,768          | 323,156         |                      | ( <sup>1</sup> ) | .4               |
| Netherlands.....                        |                      | 587,608         | 2,271,370       |                      | .5               | 3.0              |
| Sweden.....                             | 239                  | 15,552,738      | 1,921,919       | ( <sup>1</sup> )     | 14.4             | 2.6              |
| United Kingdom.....                     | 4,120,030            | 29,445,779      | 27,828,591      | 18.0                 | 27.2             | 37.0             |
| Other countries.....                    | 4,767,206            | 22,229,599      | 8,153,335       | 20.8                 | 20.6             | 11.0             |
| Total.....                              | 22,888,112           | 108,208,287     | 75,138,779      | 100.0                | 100.0            | 100.0            |
| Fruits, canned—                         | <i>Dollars.</i>      | <i>Dollars.</i> | <i>Dollars.</i> |                      |                  |                  |
| United Kingdom.....                     | 1,811,083            | 34,359,305      | 10,915,959      | 34.1                 | 82.8             | 50.7             |
| Other countries.....                    | 3,501,736            | 7,116,317       | 10,598,314      | 65.9                 | 17.2             | 49.3             |
| Total.....                              | 5,312,819            | 41,475,622      | 21,514,273      | 100.0                | 100.0            | 100.0            |
| Glucose and grape sugar:                | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  |                      |                  |                  |
| Argentina.....                          | 1,793,900            | 6,341,204       | 2,837,928       | 3.1                  | 2.5              | 1.7              |
| British Oceania.....                    | 108,836              | 1,246,848       | 1,869,237       |                      | .5               | 1.2              |
| France.....                             | 3,984,452            | 52,042,071      | 25,420          | 6.9                  | 20.4             | ( <sup>1</sup> ) |
| Italy.....                              | 845,537              | 5,909,980       | 9,049,194       | 1.5                  | 2.3              | 5.6              |
| United Kingdom.....                     | 39,345,968           | 159,035,288     | 113,643,769     | 68.6                 | 62.2             | 69.9             |
| Other countries.....                    | 11,253,487           | 31,044,308      | 35,070,620      | 19.7                 | 12.1             | 21.6             |
| Total.....                              | 57,332,150           | 255,617,709     | 162,496,168     | 100.0                | 100.0            | 100.0            |
| Grain and grain products:               | <i>Bushels.</i>      | <i>Bushels.</i> | <i>Bushels.</i> |                      |                  |                  |
| Corn—                                   |                      |                 |                 |                      |                  |                  |
| Belgium.....                            | 3,467,151            | 1,009,969       | 71,787          | 8.7                  | 9.0              | .4               |
| Canada.....                             | 13,228,984           | 6,542,025       | 10,064,068      | 33.2                 | 58.4             | 50.7             |
| Cuba.....                               | 1,074,099            | 1,934,540       | 1,833,793       | 2.7                  | 17.6             | 10.7             |
| Denmark.....                            |                      | 834,711         | 173,357         |                      | 3.0              | 1.0              |
| Germany.....                            |                      |                 | 1,328,770       |                      |                  | 7.5              |

<sup>1</sup> Less than 0.05 of 1 per cent.

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920—Continued.

| Article and country to which consigned. | Quantity.            |                 |                 | Per cent of total.   |                  |                  |
|---|----------------------|-----------------|-----------------|----------------------|------------------|------------------|
|   | Year ending Dec. 31— |                 |                 | Year ending Dec. 31— |                  |                  |
|   | 1918                 | 1919            | 1920            | 1918                 | 1919             | 1920             |
| <b>VEGETABLE MATTER—continued.</b>      |                      |                 |                 |                      |                  |                  |
| <b>Grain and grain products—Contd.</b>  |                      |                 |                 |                      |                  |                  |
| <b>Corn—Continued.</b>                  |                      |                 |                 |                      |                  |                  |
|   | <i>Bushels.</i>      | <i>Bushels.</i> | <i>Bushels.</i> | <i>P. ct.</i>        | <i>P. ct.</i>    | <i>P. ct.</i>    |
| Mexico.....                             | 2,736,239            | 133,887         | 770,814         | 6.9                  | 1.2              | 4.3              |
| Netherlands.....                        | 46,004               | 100,168         | 423,604         | .1                   | .9               | 2.4              |
| United Kingdom.....                     | 15,658,493           | 948,493         | 2,706,805       | 39.2                 | 8.5              | 15.2             |
| Other countries.....                    | 3,688,151            | 158,740         | 332,822         | 9.2                  | 1.4              | 1.8              |
| Total.....                              | 39,899,091           | 11,192,533      | 17,761,420      | 100.0                | 100.0            | 100.0            |
| <b>Wheat—</b>                           |                      |                 |                 |                      |                  |                  |
| Belgium.....                            | 12,628,186           | 24,476,490      | 20,665,729      | 11.4                 | 16.5             | 9.5              |
| Canada.....                             | 26,493,421           | 1,421,613       | 14,811,672      | 23.8                 | 1.0              | 6.8              |
| France.....                             | 6,386,134            | 27,590,718      | 26,444,984      | 5.7                  | 18.6             | 12.1             |
| Germany.....                            |                      |                 | 8,246,213       |                      |                  | 3.8              |
| Italy.....                              | 16,337,436           | 38,204,883      | 32,110,050      | 14.7                 | 25.8             | 14.7             |
| Japan.....                              |                      |                 | 10,141          |                      |                  | ( <sup>1</sup> ) |
| Mexico.....                             | 1,564                | 134,003         | 269,211         | ( <sup>1</sup> )     | .1               | .1               |
| Netherlands.....                        | 2,236,354            | 1,932,249       | 11,912,062      | 3.0                  | 1.3              | 5.5              |
| United Kingdom.....                     | 43,146,559           | 44,818,552      | 77,368,545      | 38.8                 | 30.3             | 35.4             |
| Other countries.....                    | 3,947,449            | 9,417,962       | 26,418,127      | 3.6                  | 6.4              | 12.1             |
| Total.....                              | 111,177,103          | 148,086,470     | 218,287,334     | 100.0                | 100.0            | 100.0            |
| <b>Wheat flour—</b>                     |                      |                 |                 |                      |                  |                  |
|   | <i>Barrels.</i>      | <i>Barrels.</i> | <i>Barrels.</i> |                      |                  |                  |
| Brazil.....                             | 596                  | 279,564         | 623,198         | ( <sup>1</sup> )     | 1.1              | 3.1              |
| British West Indies.....                | 110,582              | 221,346         | 354,953         | .5                   | .8               | 1.8              |
| Canada.....                             | 61,045               | 7,316           | 25,250          | .3                   | ( <sup>1</sup> ) | .1               |
| China.....                              | 2                    | 3,913           | 15,946          | ( <sup>1</sup> )     | ( <sup>1</sup> ) | .1               |
| Cuba.....                               | 541,564              | 1,408,698       | 1,389,990       | 2.5                  | 5.3              | 7.0              |
| Finland.....                            |                      | 41,729          | 369,165         |                      | .2               | 1.9              |
| Germany.....                            |                      | 42,324          | 1,077,675       |                      | .2               | 5.4              |
| Haiti.....                              | 378                  | 268,243         | 361,321         | ( <sup>1</sup> )     | 1.0              | 1.8              |
| Hongkong.....                           |                      | 10,597          | 192,936         |                      | ( <sup>1</sup> ) | 1.0              |
| Italy.....                              | 2,929,005            | 3,006,825       | 1,410,243       | 13.5                 | 11.4             | 7.1              |
| Japan.....                              |                      | 2,528           | 107,024         |                      | ( <sup>1</sup> ) | .5               |
| Netherlands.....                        | 105,090              | 1,082,207       | 730,943         | .5                   | 4.1              | 3.7              |
| Norway.....                             | 192,088              | 45,715          | 160,935         | .9                   | .2               | .8               |
| Philippine Islands.....                 | 22                   | 54,904          | 143,469         | ( <sup>1</sup> )     | .2               | .7               |
| United Kingdom.....                     | 10,013,533           | 10,440,148      | 3,435,239       | 46.1                 | 39.5             | 17.3             |
| Other countries.....                    | 7,752,797            | 9,533,824       | 9,455,705       | 35.7                 | 36.0             | 47.7             |
| Total.....                              | 21,706,700           | 26,449,881      | 19,853,992      | 100.0                | 100.0            | 100.0            |
| <b>Hops:</b>                            |                      |                 |                 |                      |                  |                  |
|   | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  |                      |                  |                  |
| British Oceania.....                    | 319,069              | 244,487         | 823,865         | 8.7                  | 1.2              | 3.2              |
| Canada.....                             | 749,503              | 2,490,098       | 1,968,821       | 20.4                 | 12.0             | 7.7              |
| United Kingdom.....                     | 76,424               | 12,822,653      | 21,421,599      | 2.1                  | 60.2             | 83.6             |
| Other countries.....                    | 2,523,356            | 5,536,266       | 1,409,970       | 68.8                 | 26.6             | 5.5              |
| Total.....                              | 3,670,352            | 20,797,504      | 25,624,055      | 100.0                | 100.0            | 100.0            |
| <b>Oil cake and oil-cake meal:</b>      |                      |                 |                 |                      |                  |                  |
| <b>Cottonseed—</b>                      |                      |                 |                 |                      |                  |                  |
| Belgium.....                            |                      | 7,824,573       | 1,133,800       |                      | 1.2              | .3               |
| Denmark.....                            |                      | 200,608,481     | 247,767,183     |                      | 31.9             | 72.9             |
| Germany.....                            |                      |                 | 20,118,977      |                      |                  | 5.9              |
| Netherlands.....                        |                      | 1,826,445       |                 |                      | .3               |                  |
| Norway.....                             |                      | 35,412,218      | 9,616,175       |                      | 5.6              | 2.8              |
| Sweden.....                             |                      | 103,780,415     | 41,266,275      |                      | 16.5             | 12.1             |
| United Kingdom.....                     | 691,800              | 249,540,669     | 6,080,636       | 5.9                  | 39.7             | 1.8              |
| Other countries.....                    | 10,975,496           | 29,143,365      | 14,553,036      | 94.1                 | 4.8              | 4.2              |
| Total.....                              | 11,667,296           | 628,133,166     | 340,045,982     | 100.0                | 100.0            | 100.0            |
| <b>Linseed or flaxseed—</b>             |                      |                 |                 |                      |                  |                  |
| Belgium.....                            |                      | 80,622,811      | 25,904,744      |                      | 22.8             | 11.0             |
| Denmark.....                            |                      | 46,023,673      | 42,135,337      |                      | 13.0             | 17.9             |
| France.....                             |                      | 263,503         |                 |                      | .1               |                  |
| Netherlands.....                        |                      | 104,614,268     | 98,188,316      |                      | 29.6             | 41.7             |
| United Kingdom.....                     | 15,422,381           | 84,678,808      | 42,425,875      | 17.9                 | 23.9             | 18.0             |
| Other countries.....                    | 70,532,001           | 37,548,415      | 26,970,705      | 82.1                 | 10.6             | 11.4             |
| Total.....                              | 85,954,382           | 353,751,483     | 235,624,977     | 100.0                | 100.0            | 100.0            |

<sup>1</sup>Less than 0.05 of 1 per cent.

TABLE 391.—Destination of principal farm products exported from the United States, 1918-1920—Continued.

| Article and country to which consigned.    | Quantity.            |                    |                    | Per cent of total.   |                  |                  |
|--|----------------------|--------------------|--------------------|----------------------|------------------|------------------|
|  | Year ending Dec. 31— |                    |                    | Year ending Dec. 31— |                  |                  |
|  | 1918                 | 1919               | 1920               | 1918                 | 1919             | 1920             |
| <b>VEGETABLE MATTER—continued.</b>         |                      |                    |                    |                      |                  |                  |
| <b>Oils, vegetable:</b>                    |                      |                    |                    |                      |                  |                  |
| Cottonseed—                                | <i>Pounds.</i>       | <i>Pounds.</i>     | <i>Pounds.</i>     | <i>P. ct.</i>        | <i>P. ct.</i>    | <i>P. ct.</i>    |
| Argentina.....                             | 922,335              | 231,314            | 2,734,813          | 0.8                  | 0.1              | 1.5              |
| Austria-Hungary.....                       |                      | 1,813,084          | 1,940,019          |                      |                  | 1.1              |
| Belgium.....                               |                      | 39,682,192         | 45,161,251         |                      | 8                | 1.7              |
| Canada.....                                | 48,116,625           | 491,621            | 45,083,545         | 40.4                 | 20.5             | 24.4             |
| Chile.....                                 | 1,604,155            | 5,102,682          | 1,149,985          | 1.3                  | 2.6              | 0.6              |
| Cuba.....                                  | 9,805,509            | 7,352,315          | 4,088,712          | 8.2                  | 3.8              | 2.4              |
| Denmark.....                               |                      | 7,211,541          | 8,720,868          |                      | 3.7              | 4.7              |
| France.....                                | 800,000              | 11,563             | 3,257,311          |                      | ( <sup>1</sup> ) | 1.8              |
| Germany.....                               |                      | 9,551,748          | 22,976,091         |                      | 4.9              | 12.4             |
| Italy.....                                 | 1,966,500            | 495,049            | 2,802,789          | 1.7                  | .5               | 1.5              |
| Mexico.....                                | 651,720              | 30,377,990         | 34,622,804         |                      | 15.7             | 18.7             |
| Netherlands.....                           |                      | 15,626,944         | 13,530,457         |                      | 8.1              | 7.3              |
| Norway.....                                |                      | 25,020             | 562,750            |                      | ( <sup>2</sup> ) | .3               |
| Rumania.....                               |                      | 13,112,629         | 1,077,366          |                      | 6.8              | .6               |
| Sweden.....                                | 672,000              | 1,274,043          | 6,156,506          |                      | .7               | 3.3              |
| Turkey, European.....                      |                      | 37,814,421         | 12,917,081         | 36.1                 | 19.6             | 7.0              |
| United Kingdom.....                        | 43,084,025           | 63,450             | 2,068,925          | ( <sup>2</sup> )     | ( <sup>2</sup> ) | 1.1              |
| Uruguay.....                               | 44,730               | 23,115,665         | 13,589,735         | 9.7                  | 12.1             | 7.4              |
| Other countries.....                       | 11,449,777           |                    |                    |                      |                  |                  |
| <b>Total.....</b>                          | <b>119,067,376</b>   | <b>193,133,201</b> | <b>184,753,824</b> | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Tobacco, leaf, stem, and trimmings:</b> |                      |                    |                    |                      |                  |                  |
| Belgium.....                               |                      | 51,081,229         | 29,106,072         |                      | 6.6              | 6.1              |
| British Africa.....                        | 8,567,544            | 14,287,892         | 12,780,858         | 2.1                  | 1.8              | 2.9              |
| British Oceania.....                       | 11,363,314           | 12,996,852         | 18,931,000         | 2.8                  | 1.7              | 3.9              |
| Canada.....                                | 28,499,427           | 19,855,703         | 16,683,784         | 6.5                  | 2.6              | 3.5              |
| China.....                                 | 14,581,203           | 14,558,402         | 19,224,323         | 3.6                  | 1.9              | 3.8              |
| France.....                                | 65,487,745           | 81,789,541         | 60,398,043         | 16.1                 | 10.5             | 12.6             |
| French Africa.....                         | 2,950,749            | 8,914,872          | 4,368,751          | .7                   | 1.1              | .9               |
| Germany.....                               |                      | 4,893,832          | 18,442,558         |                      | .6               | 3.8              |
| Italy.....                                 | 50,357,819           | 43,623,888         | 44,187,328         | 12.4                 | 5.6              | 9.2              |
| Japan.....                                 | 3,723,740            | 4,230,513          | 7,130,428          | .9                   | .5               | 1.5              |
| Netherlands.....                           |                      | 68,684,267         | 29,143,130         |                      | 8.8              | 6.1              |
| Spain.....                                 | 11,449,293           | 24,291,963         | 3,248,408          | 2.8                  | 3.1              | .7               |
| Sweden.....                                | 4,638,371            | 13,757,783         | 14,551,474         | 1.1                  | 1.8              | 3.0              |
| Switzerland.....                           | 900,381              | 14,443,161         | 3,719,659          | .2                   | 1.9              | .8               |
| United Kingdom.....                        | 183,555,420          | 338,872,440        | 162,768,974        | 45.1                 | 43.6             | 33.9             |
| Other countries.....                       | 22,801,712           | 60,595,767         | 36,215,547         | 5.7                  | 7.9              | 7.5              |
| <b>Total.....</b>                          | <b>406,826,718</b>   | <b>776,678,135</b> | <b>479,900,062</b> | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>FOREST PRODUCTS.</b>                    |                      |                    |                    |                      |                  |                  |
| <b>Naval stores:</b>                       |                      |                    |                    |                      |                  |                  |
| Rosin—                                     | <i>Barrels.</i>      | <i>Barrels.</i>    | <i>Barrels.</i>    |                      |                  |                  |
| Argentina.....                             | 68,632               | 116,708            | 139,345            | 8.8                  | 9.6              | 11.7             |
| Austria-Hungary.....                       |                      | 2,969              | 4,179              |                      | .2               | ( <sup>1</sup> ) |
| Belgium.....                               |                      | 14,623             | 31,065             |                      | 1.2              | 2.7              |
| Brasil.....                                | 67,760               | 154,513            | 149,965            | 12.5                 | 12.8             | 12.6             |
| Canada.....                                | 140,688              | 71,316             | 102,633            | 18.0                 | 5.9              | 8.8              |
| Germany.....                               |                      | 98                 | 31,310             |                      | ( <sup>1</sup> ) | 2.7              |
| Italy.....                                 | 26                   | 18,470             | 32,797             | ( <sup>1</sup> )     | 1.5              | 2.8              |
| Netherlands.....                           |                      | 24,554             | 11,463             |                      | 2.0              | 1.0              |
| Russia, European.....                      |                      | 45                 |                    |                      | ( <sup>1</sup> ) |                  |
| United Kingdom.....                        | 191,038              | 504,459            | 269,891            | 24.5                 | 41.7             | 25.3             |
| Other countries.....                       | 280,993              | 301,822            | 371,680            | 35.2                 | 25.1             | 31.9             |
| <b>Total.....</b>                          | <b>779,027</b>       | <b>1,209,627</b>   | <b>1,164,328</b>   | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Turpentine, spirits of—</b>             | <i>Gallons.</i>      | <i>Gallons.</i>    | <i>Gallons.</i>    |                      |                  |                  |
| Argentina.....                             | 183,702              | 528,391            | 636,682            | 4.9                  | 5.0              | 6.7              |
| Belgium.....                               |                      | 304,811            | 268,337            |                      | 2.9              | 3.1              |
| British Oceania.....                       | 800,361              | 137,611            | 780,368            | 21.5                 | 1.3              | 8.3              |
| Canada.....                                | 1,134,122            | 969,776            | 864,297            | 30.5                 | 9.1              | 9.1              |
| Germany.....                               |                      | 10,716             | 71,590             |                      | .1               | .8               |
| Netherlands.....                           |                      | 673,663            | 459,330            |                      | 6.3              | 4.9              |
| United Kingdom.....                        | 294,076              | 6,220,048          | 5,238,621          | 7.9                  | 58.3             | 55.4             |
| Other countries.....                       | 1,304,832            | 1,827,096          | 1,116,198          | 35.2                 | 17.0             | 11.7             |
| <b>Total.....</b>                          | <b>3,717,093</b>     | <b>10,672,102</b>  | <b>9,458,423</b>   | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |

<sup>1</sup> Austria only<sup>2</sup> Less than 0.05 of 1 per cent.

TABLE 391.—*Destination of principal farm products exported from the United States, 1918-1920—Continued.*

| Article and country to which consigned. | Quantity.            |                  |                  | Per cent of total.   |               |               |
|---|----------------------|------------------|------------------|----------------------|---------------|---------------|
|   | Year ending Dec. 31— |                  |                  | Year ending Dec. 31— |               |               |
|   | 1918                 | 1919             | 1920             | 1918                 | 1919          | 1920          |
| <b>FOREST PRODUCTS—continued.</b>       |                      |                  |                  |                      |               |               |
| <b>Lumber:</b>                          |                      |                  |                  |                      |               |               |
| <b>Fir—</b>                             | <i>M feet.</i>       | <i>M feet.</i>   | <i>M feet.</i>   | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Australia.....                          | 54,958               | 87,650           | 72,144           | 20.2                 | 12.5          | 16.0          |
| Canada.....                             | 16,557               | 27,846           | 10,151           | 6.1                  | 9.2           | 2.2           |
| Chile.....                              | 28,488               | 6,068            | 23,088           | 10.5                 | 2.0           | 5.1           |
| China.....                              | 13,479               | 49,544           | 88,567           | 4.9                  | 18.5          | 19.6          |
| Japan.....                              | 20,926               | 27,810           | 63,165           | 11.4                 | 9.2           | 14.0          |
| Mexico.....                             | 6,880                | 7,879            | 8,101            | 2.5                  | 2.6           | 1.7           |
| New Zealand.....                        | 4,163                | 3,873            | 5,055            | 1.5                  | 1.3           | 1.1           |
| Panama.....                             | 2,960                | 18,281           | 8,372            | 1.1                  | 6.1           | 1.8           |
| Peru.....                               | 50,880               | 33,358           | 57,036           | 18.7                 | 11.1          | 12.7          |
| United Kingdom.....                     | 24,341               | 40,522           | 41,032           | 8.9                  | 13.5          | 9.1           |
| Other countries.....                    | 38,809               | 48,363           | 74,402           | 14.2                 | 16.0          | 16.7          |
| <b>Total.....</b>                       | <b>272,401</b>       | <b>301,144</b>   | <b>451,223</b>   | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Oak—</b>                             |                      |                  |                  |                      |               |               |
| Argentina.....                          | 2,779                | 13,105           | 4,540            | 4.3                  | 8.3           | 4.3           |
| Canada.....                             | 44,021               | 42,799           | 42,487           | 63.1                 | 27.1          | 40.4          |
| France.....                             | 793                  | 2,520            | 385              | 1.2                  | 1.6           | .4            |
| United Kingdom.....                     | 8,791                | 70,915           | 33,615           | 13.6                 | 44.9          | 32.0          |
| Other countries.....                    | 8,279                | 28,598           | 24,114           | 12.8                 | 18.1          | 22.9          |
| <b>Total.....</b>                       | <b>64,663</b>        | <b>157,937</b>   | <b>105,141</b>   | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Pine, yellow, long leaf—</b>         |                      |                  |                  |                      |               |               |
| Argentina.....                          | 17,902               | 73,978           | 92,596           | 6.0                  | 16.9          | 14.5          |
| Brazil.....                             | 920                  | 1,024            | 9,902            | .3                   | .2            | 1.6           |
| Canada.....                             | 1,845                | 1,106            | 753              | .6                   | .3            | .1            |
| Cuba.....                               | 168,753              | 164,843          | 254,959          | 56.3                 | 35.4          | 40.0          |
| France.....                             | 167                  | 9,408            | 2,129            | .1                   | 2.1           | .3            |
| Italy.....                              | 2,670                | 2,621            | 2,019            | .9                   | .6            | .3            |
| Mexico.....                             | 30,298               | 34,896           | 73,865           | 10.1                 | 8.0           | 11.6          |
| Panama.....                             | 12,442               | 7,369            | 10,511           | 4.1                  | 1.7           | 1.6           |
| Spain.....                              | 339                  | 7,797            | 18,971           | .1                   | 1.8           | 3.0           |
| United Kingdom.....                     | 18,365               | 66,108           | 43,589           | 6.1                  | 15.1          | 6.8           |
| Uruguay.....                            | 2,019                | 16,394           | 18,956           | .7                   | 3.7           | 3.0           |
| Other countries.....                    | 44,202               | 62,229           | 108,902          | 14.7                 | 14.2          | 17.2          |
| <b>Total.....</b>                       | <b>299,922</b>       | <b>437,773</b>   | <b>637,152</b>   | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Railroad ties:</b>                   | <i>Number.</i>       | <i>Number.</i>   | <i>Number.</i>   |                      |               |               |
| Canada.....                             | 1,580,127            | 1,573,937        | 922,547          | 58.9                 | 33.5          | 21.7          |
| Cuba.....                               | 471,713              | 319,224          | 758,039          | 17.6                 | 6.8           | 17.9          |
| France.....                             | 29,953               | 62,543           | .....            | 1.1                  | 1.3           | .....         |
| Honduras.....                           | 42,216               | 54,463           | 282,027          | 1.6                  | 1.2           | 6.6           |
| Mexico.....                             | 317,332              | 476,970          | 516,754          | 11.8                 | 10.1          | 12.2          |
| United Kingdom.....                     | 19,435               | 2,001,994        | 1,228,570        | .7                   | 42.6          | 29.0          |
| Other countries.....                    | 221,047              | 210,771          | 537,301          | 8.3                  | 4.5           | 12.6          |
| <b>Total.....</b>                       | <b>2,681,823</b>     | <b>4,699,902</b> | <b>4,246,238</b> | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Timber, sawed:</b>                   |                      |                  |                  |                      |               |               |
| <b>Pitch pine, long leaf—</b>           | <i>M feet.</i>       | <i>M feet.</i>   | <i>M feet.</i>   |                      |               |               |
| Canada.....                             | 532                  | 393              | 786              | 1.5                  | .3            | .6            |
| France.....                             | 192                  | 8,433            | 5,950            | .5                   | 5.5           | 4.4           |
| Italy.....                              | 19,928               | 17,551           | 5,280            | .....                | 11.4          | 4.0           |
| United Kingdom.....                     | 15,240               | 100,133          | 74,017           | 55.5                 | 64.9          | 54.9          |
| Other countries.....                    | .....                | 27,676           | 48,806           | 42.5                 | 17.9          | 36.1          |
| <b>Total.....</b>                       | <b>35,892</b>        | <b>154,186</b>   | <b>134,939</b>   | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |



TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920.

| Article and country of origin.          | Quantity.            |                    |                    | Per cent of total.   |                  |                  |
|---|----------------------|--------------------|--------------------|----------------------|------------------|------------------|
|   | Year ending Dec. 31— |                    |                    | Year ending Dec. 31— |                  |                  |
|   | 1918                 | 1919               | 1920               | 1918                 | 1919             | 1920             |
| <b>ANIMAL MATTER.</b>                   |                      |                    |                    |                      |                  |                  |
| <b>Cattle:</b>                          | <i>Number.</i>       | <i>Number.</i>     | <i>Number.</i>     | <i>P. ct.</i>        | <i>P. ct.</i>    | <i>P. ct.</i>    |
| Canada.....                             | 249,316              | 550,004            | 316,559            | 70.7                 | 85.6             | 83.5             |
| Mexico.....                             | 106,632              | 90,541             | 58,926             | 28.5                 | 14.1             | 15.5             |
| Other countries.....                    | 2,653                | 1,850              | 3,629              | .8                   | .3               | 1.0              |
| <b>Total.....</b>                       | <b>352,601</b>       | <b>642,395</b>     | <b>379,114</b>     | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Horses:</b>                          |                      |                    |                    |                      |                  |                  |
| Canada.....                             | 3,386                | 4,495              | 4,084              | 87.5                 | 90.0             | 91.2             |
| France.....                             | 211                  | 11                 | 25                 | 5.5                  | .2               | .6               |
| Mexico.....                             | 141                  | 412                | 178                | 3.6                  | 8.2              | 4.0              |
| Other countries.....                    | 131                  | 76                 | 189                | 3.4                  | 1.6              | 4.2              |
| <b>Total.....</b>                       | <b>3,869</b>         | <b>4,994</b>       | <b>4,476</b>       | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Cheese, including substitutes:</b>   | <i>Pounds.</i>       | <i>Pounds.</i>     | <i>Pounds.</i>     |                      |                  |                  |
| Argentina.....                          | 6,589,121            | 5,043,010          | 9,871,815          | 87.1                 | 44.5             | 61.7             |
| Canada.....                             | 100,243              | 4,731,529          | 813,001            | 1.3                  | 41.8             | 5.1              |
| France.....                             | 542,010              | 680,867            | 1,583,119          | 7.1                  | 6.0              | 9.9              |
| Italy.....                              | 5,044                | 373,807            | 985,197            | .1                   | 3.3              | 6.2              |
| Netherlands.....                        |                      | 4,947              | 863,405            |                      | ( <sup>1</sup> ) | 5.4              |
| Switzerland.....                        |                      | 12,354             | 801,902            |                      | .1               | 5.0              |
| Other countries.....                    | 325,626              | 485,090            | 1,075,236          | 4.4                  | 4.8              | 6.7              |
| <b>Total.....</b>                       | <b>7,532,044</b>     | <b>11,332,204</b>  | <b>15,993,725</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Fibers, animal:</b>                  |                      |                    |                    |                      |                  |                  |
| <b>Silk, raw—</b>                       |                      |                    |                    |                      |                  |                  |
| China.....                              | 5,750,902            | 9,099,492          | 5,931,863          | 17.5                 | 20.3             | 19.7             |
| Italy.....                              | 5,503                | 1,885,807          | 1,111,132          | ( <sup>1</sup> )     | 4.2              | 3.7              |
| Japan.....                              | 27,074,811           | 33,796,581         | 22,903,609         | 82.4                 | 75.3             | 76.2             |
| Other countries.....                    | 34,237               | 125,038            | 111,770            | .1                   | .2               | .4               |
| <b>Total.....</b>                       | <b>32,865,453</b>    | <b>44,816,918</b>  | <b>30,058,374</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Wool, class 1—</b>                   |                      |                    |                    |                      |                  |                  |
| Argentina.....                          | 203,238,338          | 118,854,446        | 71,910,150         | 54.4                 | 35.6             | 33.9             |
| Australia.....                          | 65,117,777           | 46,034,615         | 37,371,888         | 17.4                 | 13.3             | 17.6             |
| Belgium.....                            |                      | 204,210            | 1,249,998          |                      | .1               | .6               |
| British South Africa.....               | 51,063,544           | 51,466,180         | 17,296,456         | 13.7                 | 15.4             | 8.1              |
| Canada.....                             | 2,717,725            | 12,066,657         | 7,628,312          | .7                   | 3.6              | 3.6              |
| Chile.....                              | 10,886,780           | 11,959,417         | 14,514,334         | 2.9                  | 3.6              | 6.8              |
| China.....                              | 10,508,638           | 8,323,802          | 525,409            | 2.8                  | 2.6              | .2               |
| New Zealand.....                        | 6,276,375            | 14,234,285         | 25,531             | 1.7                  | 4.3              | ( <sup>1</sup> ) |
| United Kingdom.....                     | 38,675               | 14,704,025         | 28,967,677         | ( <sup>1</sup> )     | 4.4              | 13.6             |
| Uruguay.....                            | 17,655,598           | 49,981,366         | 29,767,584         | 4.7                  | 14.9             | 14.0             |
| Other countries.....                    | 6,410,427            | 6,115,434          | 3,134,401          | 1.7                  | 1.7              | 1.6              |
| <b>Total.....</b>                       | <b>373,910,875</b>   | <b>334,069,538</b> | <b>212,302,240</b> | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Wool, class 2—</b>                   |                      |                    |                    |                      |                  |                  |
| Argentina.....                          | 2,357,025            | 2,087,101          | 1,347,067          | 22.4                 | 14.0             | 11.9             |
| Canada.....                             | 709,549              | 650,924            | 190,247            | 6.7                  | 4.4              | 1.8              |
| China.....                              | 1,205,567            | 642,970            | 2,863,800          | 11.5                 | 4.3              | 25.2             |
| United Kingdom.....                     | 60,280               | 3,382,806          | 3,063,162          | .6                   | 22.8             | 27.0             |
| Other countries.....                    | 6,192,218            | 8,081,171          | 3,881,918          | 58.8                 | 54.5             | 34.1             |
| <b>Total.....</b>                       | <b>10,524,639</b>    | <b>14,844,972</b>  | <b>11,355,194</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Wool, class 3—</b>                   |                      |                    |                    |                      |                  |                  |
| Argentina.....                          | 15,068,215           | 14,045,112         | 1,764,692          | 21.7                 | 14.5             | 4.9              |
| British East Indies.....                | 9,575                | 68,218             | 365,900            | ( <sup>1</sup> )     | .1               | 1.0              |
| British South Africa.....               | 4,442,103            | 2,286,257          | 674,041            | 6.4                  | 2.5              | 1.9              |
| Chile.....                              | 8,196,911            | 13,274,457         | 3,715,870          | 11.8                 | 17.7             | 10.4             |
| China.....                              | 31,198,498           | 29,813,744         | 11,762,921         | 45.0                 | 30.8             | 32.8             |
| Russia (Asiatic and Euro-<br>pean)..... | 2,739,987            | 1,539,889          | 2,650,565          | 4.0                  | 1.6              | 7.4              |
| Turkey, Asiatic.....                    |                      | 1,353,398          | 2,810,036          |                      | 1.4              | 7.8              |
| Turkey, European.....                   |                      | 2,931,914          | 2,349,343          |                      | 3.0              | 6.5              |
| United Kingdom.....                     |                      | 19,044,800         | 6,380,016          |                      | 19.6             | 17.8             |
| Other countries.....                    | 7,630,569            | 12,492,475         | 3,897,123          | 11.1                 | 12.3             | 9.5              |
| <b>Total.....</b>                       | <b>69,291,858</b>    | <b>96,943,324</b>  | <b>35,870,207</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |

<sup>1</sup>Less than 0.05 of 1 per cent.

TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920—Continued.

| Article and country of origin.          | Quantity.            |                      |                      | Per cent of total.   |                  |                  |
|---|----------------------|----------------------|----------------------|----------------------|------------------|------------------|
|   | Year ending Dec. 31— |                      |                      | Year ending Dec. 31— |                  |                  |
|   | 1918                 | 1919                 | 1920                 | 1918                 | 1919             | 1920             |
| <b>ANIMAL MATTER—continued.</b>         |                      |                      |                      |                      |                  |                  |
| <b>Hides and skins other than furs:</b> |                      |                      |                      |                      |                  |                  |
| <b>Calfskins—</b>                       | <i>Pounds.</i>       | <i>Pounds.</i>       | <i>Pounds.</i>       | <i>P. ct.</i>        | <i>P. ct.</i>    | <i>P. ct.</i>    |
| Argentina.....                          | 486, 184             | 4, 467, 287          | 2, 872, 754          | 5.8                  | 6.9              | 8.2              |
| Belgium.....                            |                      | 721, 686             | 753, 992             |                      | 1.1              | 2.1              |
| Canada.....                             | 1, 031, 069          | 5, 280, 116          | 2, 719, 139          | 13.6                 | 8.2              | 7.7              |
| Denmark.....                            |                      | 4, 086, 657          | 2, 230, 908          |                      | 6.3              | 6.4              |
| East Indies.....                        | 3, 284, 283          | 24, 045, 701         | 7, 708, 506          | 43.3                 | 37.2             | 21.9             |
| France.....                             | 30, 947              | 4, 590, 533          | 8, 201, 685          | .4                   | 7.1              | 23.3             |
| Germany.....                            |                      |                      | 7, 063               |                      |                  | ( <sup>1</sup> ) |
| Netherlands.....                        | 863, 679             | 7, 737, 059          | 3, 108, 838          | 11.4                 | 12.0             | 8.8              |
| Norway.....                             |                      | 2, 012, 338          | 1, 361, 112          |                      | 3.1              | 3.9              |
| United Kingdom.....                     | 12, 643              | 1, 664, 878          | 811, 420             | .2                   | 2.6              | 2.3              |
| Other countries.....                    | 1, 923, 968          | 9, 949, 296          | 5, 356, 829          | 25.3                 | 15.5             | 15.4             |
| <b>Total.....</b>                       | <b>7, 552, 723</b>   | <b>64, 555, 521</b>  | <b>35, 132, 266</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Cattle hides—</b>                    |                      |                      |                      |                      |                  |                  |
| Argentina.....                          | 89, 072, 009         | 146, 103, 225        | 113, 117, 368        | 40.3                 | 35.9             | 41.1             |
| Belgium.....                            |                      | 174, 066             | 139, 018             |                      | ( <sup>1</sup> ) | .1               |
| Brazil.....                             | 12, 748, 607         | 29, 517, 585         | 19, 488, 355         | 5.8                  | 7.0              | 7.1              |
| Canada.....                             | 19, 253, 175         | 43, 062, 215         | 27, 567, 282         | 8.7                  | 10.6             | 10.0             |
| China.....                              | 5, 124, 640          | 7, 748, 834          | 4, 755, 174          | 2.3                  | 1.9              | 1.7              |
| Colombia.....                           | 7, 522, 824          | 14, 979, 377         | 9, 977, 059          | 3.4                  | 3.7              | 3.6              |
| Cuba.....                               | 10, 985, 264         | 12, 500, 062         | 6, 549, 229          | 5.0                  | 3.1              | 2.4              |
| East Indies.....                        | 1, 522, 893          | 14, 350, 871         | 9, 046, 283          | .7                   | 3.5              | 3.3              |
| France.....                             |                      | 7, 701, 942          | 7, 132, 294          |                      | 1.9              | 2.6              |
| Italy.....                              |                      | 93, 351              | 1, 999, 432          |                      | ( <sup>1</sup> ) | .7               |
| Mexico.....                             | 22, 976, 876         | 26, 288, 312         | 7, 064, 935          | 10.4                 | 6.5              | 2.6              |
| Netherlands.....                        | 37, 258              | 4, 031, 983          | 2, 422, 620          | ( <sup>1</sup> )     | 1.0              | .9               |
| United Kingdom.....                     | 27, 459              | 5, 370, 120          | 1, 907, 200          | ( <sup>1</sup> )     | 1.3              | .7               |
| Uruguay.....                            | 35, 541, 069         | 48, 294, 455         | 25, 905, 130         | 16.1                 | 11.9             | 9.4              |
| Venezuela.....                          | 2, 753, 236          | 7, 922, 391          | 4, 733, 757          | 1.2                  | 1.9              | 1.7              |
| Other countries.....                    | 13, 485, 670         | 39, 143, 489         | 33, 519, 371         | 6.1                  | 9.6              | 12.1             |
| <b>Total.....</b>                       | <b>221, 051, 070</b> | <b>407, 282, 271</b> | <b>275, 334, 507</b> | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Goatskins—</b>                       |                      |                      |                      |                      |                  |                  |
| Aden.....                               | 866, 760             | 6, 726, 235          | 4, 301, 269          | 1.4                  | 5.0              | 5.4              |
| Africa n. e. s.....                     | 31, 172              | 2, 385, 158          | 2, 355, 373          | .1                   | 1.8              | 2.9              |
| Argentina.....                          | 2, 326, 191          | 7, 474, 336          | 2, 898, 427          | 3.7                  | 5.6              | 3.6              |
| Brazil.....                             | 2, 906, 400          | 6, 606, 837          | 4, 894, 406          | 4.7                  | 4.9              | 6.1              |
| British Africa.....                     | 3, 190, 091          | 7, 931, 326          | 3, 938, 275          | 5.1                  | 5.9              | 4.9              |
| China.....                              | 13, 811, 654         | 15, 217, 301         | 19, 061, 518         | 22.1                 | 11.4             | 23.8             |
| East Indies.....                        | 32, 446, 710         | 62, 772, 369         | 29, 205, 295         | 52.0                 | 47.0             | 36.5             |
| France.....                             | 12, 630              | 1, 848, 224          | 816, 267             | ( <sup>1</sup> )     | 1.4              | 1.0              |
| Mexico.....                             | 2, 889, 599          | 3, 315, 956          | 1, 633, 663          | 4.6                  | 2.5              | 2.0              |
| United Kingdom.....                     | 227, 539             | 4, 432, 373          | 1, 885, 025          | .4                   | 3.3              | 2.3              |
| Venezuela.....                          | 752, 546             | 2, 813, 980          | 1, 650, 798          | 1.2                  | 2.1              | 2.1              |
| Other countries.....                    | 2, 902, 257          | 12, 132, 689         | 7, 494, 211          | 4.7                  | 9.1              | 9.4              |
| <b>Total.....</b>                       | <b>62, 363, 549</b>  | <b>133, 656, 814</b> | <b>80, 204, 637</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |
| <b>Sheepskins—</b>                      |                      |                      |                      |                      |                  |                  |
| Aden.....                               | 622, 691             | 2, 404, 391          | 1, 352, 834          | 1.2                  | 2.9              | 1.6              |
| Argentina.....                          | 9, 087, 101          | 15, 674, 103         | 13, 079, 809         | 17.3                 | 18.4             | 15.5             |
| Brazil.....                             | 985, 249             | 3, 175, 161          | 2, 420, 521          | 1.9                  | 3.7              | 2.9              |
| British India.....                      | 2, 789, 044          | 4, 694, 998          | 4, 981, 618          | 5.3                  | 5.5              | 6.0              |
| British Oceania.....                    | 25, 000, 044         | 16, 932, 622         | 23, 890, 470         | 47.7                 | 19.9             | 28.9             |
| British South Africa.....               | 5, 937, 899          | 7, 415, 027          | 4, 678, 403          | 11.3                 | 8.7              | 5.7              |
| Canada.....                             | 798, 873             | 5, 341, 467          | 3, 111, 231          | 1.5                  | 6.3              | 3.8              |
| China.....                              | 1, 521, 008          | 2, 072, 754          | 600, 878             | 2.9                  | 2.4              | .7               |
| France.....                             | 248, 610             | 370, 094             | 653, 980             | .5                   | .4               | .8               |
| Russia, European.....                   |                      | 76, 423              | 40, 240              |                      | ( <sup>1</sup> ) |                  |
| United Kingdom.....                     | 373, 505             | 9, 971, 075          | 11, 950, 393         | .7                   | 11.7             | 14.4             |
| Uruguay.....                            | 570, 778             | 2, 491, 237          | 830, 733             | 1.1                  | 2.9              | 1.0              |
| Other countries.....                    | 4, 529, 639          | 14, 321, 467         | 14, 567, 861         | 8.6                  | 17.1             | 17.7             |
| <b>Total.....</b>                       | <b>52, 464, 351</b>  | <b>85, 031, 819</b>  | <b>82, 748, 981</b>  | <b>100.0</b>         | <b>100.0</b>     | <b>100.0</b>     |

<sup>1</sup> Less than 0.05 or 0.1 per cent.

TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920—Continued.

| Article and country of origin.                       | Quantity.            |                      |                      | Per cent of total.   |               |               |
|--|----------------------|----------------------|----------------------|----------------------|---------------|---------------|
|  | Year ending Dec. 31— |                      |                      | Year ending Dec. 31— |               |               |
|  | 1918                 | 1919                 | 1920                 | 1918                 | 1919          | 1920          |
| <b>VEGETABLE MATTER.</b>                             |                      |                      |                      |                      |               |               |
| <b>Cocoa, crude:</b>                                 | <i>Pounds.</i>       | <i>Pounds.</i>       | <i>Pounds.</i>       | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Brazil.....  | 66,007,834           | 69,900,057           | 60,577,524           | 18.3                 | 17.9          | 17.6          |
| British West Africa.....                             | 93,473,106           | 158,713,898          | 82,083,150           | 26.0                 | 40.6          | 23.9          |
| British West Indies.....                             | 51,535,501           | 30,199,700           | 34,642,516           | 14.3                 | 7.7           | 10.1          |
| Dominican Republic.....                              | 38,099,255           | 44,665,321           | 42,998,532           | 10.6                 | 11.4          | 12.5          |
| Ecuador.....   | 68,920,773           | 46,404,529           | 61,178,384           | 19.1                 | 11.9          | 17.8          |
| Portugal.....  | 1,087,271            | 12,190,057           | 12,190,057           | .....                | .....         | .....         |
| United Kingdom.....                                  | 478,421              | 7,257,064            | 13,464,802           | .....                | .....         | .....         |
| Venezuela.....                                       | 23,318,711           | 10,726,250           | 16,381,647           | 6.5                  | 1.9           | 3.9           |
| Other countries.....                                 | 18,126,110           | 22,353,219           | 20,180,220           | 5.1                  | 2.7           | 4.8           |
| <b>Total.....</b>                                    | <b>359,959,761</b>   | <b>391,397,309</b>   | <b>343,666,812</b>   | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Coffee:</b>                                       |                      |                      |                      |                      |               |               |
| Brazil.....  | 599,991,374          | 787,312,293          | 785,810,689          | 57.0                 | 59.0          | 60.6          |
| Central American States and<br>British Honduras..... | 195,259,324          | 131,638,695          | 159,200,281          | 18.6                 | 9.9           | 12.3          |
| Colombia.....  | 118,909,462          | 150,483,853          | 194,682,616          | 11.3                 | 11.3          | 15.0          |
| East Indies.....                                     | 4,756,528            | 56,919,126           | 28,674,951           | .5                   | 4.3           | 2.2           |
| Mexico.....  | 19,849,230           | 29,567,469           | 19,519,865           | 1.9                  | 2.2           | 1.5           |
| Netherlands.....                                     | 1,335                | 1,126,546            | 1,126,546            | .....                | (1)           | .....         |
| Venezuela.....                                       | 83,654,080           | 109,777,831          | 65,970,854           | 5.1                  | 8.2           | 5.1           |
| West Indies and Bermuda.....                         | 83,469,094           | 42,013,841           | 29,204,734           | 5.1                  | 3.2           | 2.3           |
| Other countries.....                                 | 6,321,809            | 25,849,624           | 13,248,674           | .5                   | 1.9           | .9            |
| <b>Total.....</b>                                    | <b>1,062,201,501</b> | <b>1,333,564,087</b> | <b>1,297,439,310</b> | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Fibers, vegetable:</b>                            |                      |                      |                      |                      |               |               |
| <b>Cotton—</b>                                       |                      |                      |                      |                      |               |               |
| British India.....                                   | 1,665,279            | 4,927,097            | 7,044,100            | 1.5                  | 2.8           | 2.3           |
| Egypt.....   | 63,521,653           | 86,485,327           | 179,894,406          | 58.4                 | 49.3          | 60.0          |
| Mexico.....  | 22,983,541           | 30,890,061           | 38,084,625           | 20.4                 | 17.6          | 12.7          |
| Peru.....  | 4,406,303            | 20,213,172           | 25,450,465           | 3.9                  | 11.5          | 8.5           |
| United Kingdom.....                                  | .....                | 18,545,720           | 14,006,601           | .....                | 10.6          | 4.7           |
| Other countries.....                                 | 20,100,316           | 14,280,991           | 35,508,191           | 17.8                 | 8.2           | 11.8          |
| <b>Total.....</b>                                    | <b>112,684,092</b>   | <b>175,358,368</b>   | <b>299,994,378</b>   | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Flax—</b>   | <i>Long tons.</i>    | <i>Long tons.</i>    | <i>Long tons.</i>    |                      |               |               |
| Belgium.....   | .....                | 18                   | .....                | .....                | .4            | .8            |
| Canada.....  | 4,583                | 1,370                | 3,872                | 58.3                 | 31.0          | 57.0          |
| Russia, European.....                                | 2,502                | 21                   | 385                  | 31.8                 | .5            | 5.7           |
| United Kingdom.....                                  | 304                  | 1,510                | 819                  | 3.9                  | 34.2          | 4.7           |
| Other countries.....                                 | 467                  | 1,501                | 2,163                | 6.0                  | 33.9          | 31.8          |
| <b>Total.....</b>                                    | <b>7,856</b>         | <b>4,420</b>         | <b>6,791</b>         | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Jute and jute butts—</b>                          |                      |                      |                      |                      |               |               |
| British East Indies.....                             | 71,300               | 61,966               | 94,688               | 99.9                 | 99.4          | 98.6          |
| Other countries.....                                 | 105                  | 306                  | 1,351                | .1                   | .6            | 1.4           |
| <b>Total.....</b>                                    | <b>71,414</b>        | <b>62,332</b>        | <b>96,039</b>        | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Manila fiber—</b>                                 |                      |                      |                      |                      |               |               |
| Philippine Islands.....                              | 78,305               | 63,044               | 66,675               | 99.4                 | 99.3          | 98.8          |
| Other countries.....                                 | 478                  | 492                  | 791                  | .6                   | .7            | 1.2           |
| <b>Total.....</b>                                    | <b>78,783</b>        | <b>63,536</b>        | <b>67,466</b>        | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Sisal grass—</b>                                  |                      |                      |                      |                      |               |               |
| Mexico.....  | 139,351              | 133,591              | 164,187              | 91.8                 | 92.4          | 90.8          |
| Other countries.....                                 | 12,625               | 10,951               | 16,572               | 8.2                  | 7.6           | 9.2           |
| <b>Total.....</b>                                    | <b>151,976</b>       | <b>144,542</b>       | <b>180,759</b>       | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |
| <b>Bananas:</b>                                      | <i>Bunches.</i>      | <i>Bunches.</i>      | <i>Bunches.</i>      |                      |               |               |
| British West Indies.....                             | 3,033,262            | 6,912,779            | 7,143,123            | 9.4                  | 18.7          | 18.2          |
| Central American States and<br>British Honduras..... | 23,470,560           | 24,293,461           | 27,006,605           | 72.8                 | 65.7          | 68.7          |
| Cuba.....  | 972,426              | 1,515,832            | 1,697,020            | 3.0                  | 4.1           | 4.3           |
| South America.....                                   | 4,652,004            | 4,094,940            | 2,679,154            | 14.4                 | 11.1          | 6.8           |
| Other countries.....                                 | 120,776              | 176,083              | 798,655              | .4                   | .4            | 2.0           |
| <b>Total.....</b>                                    | <b>32,249,028</b>    | <b>36,993,095</b>    | <b>39,310,582</b>    | <b>100.0</b>         | <b>100.0</b>  | <b>100.0</b>  |

\* Less than 0.05 of 1 per cent.

TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920—Continued.

| Article and country of origin.     | Quantity.            |                 |                 | Per cent of total.   |               |                  |
|------------------------------------|----------------------|-----------------|-----------------|----------------------|---------------|------------------|
|                                    | Year ending Dec. 31— |                 |                 | Year ending Dec. 31— |               |                  |
|                                    | 1918                 | 1919            | 1920            | 1918                 | 1919          | 1920             |
| <b>VEGETABLE MATTER—continued.</b> |                      |                 |                 |                      |               |                  |
| Walnuts:                           | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i>    |
| China.....                         | 1,891,243            | 7,080,192       | 6,701,431       | 14.5                 | 22.5          | 21.0             |
| France.....                        | 6,552,094            | 8,519,292       | 14,718,220      | 50.4                 | 27.0          | 46.2             |
| Italy.....                         | 909,196              | 6,360,433       | 5,411,393       | 7.0                  | 20.2          | 17.0             |
| Turkey, Asiatic.....               |                      |                 | 151,685         |                      |               | .5               |
| Other countries.....               | 3,658,871            | 9,536,060       | 4,908,103       | 28.1                 | 30.3          | 15.3             |
| Total.....                         | 13,011,404           | 31,495,977      | 31,890,832      | 100.0                | 100.0         | 100.0            |
| Oils, vegetable:                   | <i>Gallons.</i>      | <i>Gallons.</i> | <i>Gallons.</i> |                      |               |                  |
| Olive, edible—                     |                      |                 |                 |                      |               |                  |
| France.....                        | 88,088               | 183,124         | 382,040         | 51.5                 | 2.0           | 9.4              |
| Italy.....                         | 5,729                | 251,902         | 1,124,041       | 3.3                  | 2.8           | 27.6             |
| Spain.....                         | 65,895               | 8,557,415       | 2,420,592       | 38.5                 | 94.8          | 59.3             |
| Other countries.....               | 11,449               | 31,694          | 152,138         | 6.7                  | .4            | 3.7              |
| Total.....                         | 171,161              | 9,024,136       | 4,078,811       | 100.0                | 100.0         | 100.0            |
| Soya bean oil—                     | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  |                      |               |                  |
| China.....                         | 13,535,334           | 11,230,292      | 2,484,191       | 4.0                  | 5.7           | 2.2              |
| Japanese-China.....                | 230,839,925          | 93,042,642      | 57,420,720      | 68.7                 | 50.6          | 51.2             |
| Japan.....                         | 91,605,233           | 84,215,232      | 52,301,232      | 27.3                 | 43.0          | 46.6             |
| Other countries.....               | 656                  | 1,317,255       | 1,907           | ( <sup>1</sup> )     | .7            | ( <sup>1</sup> ) |
| Total.....                         | 335,984,148          | 195,808,421     | 112,213,750     | 100.0                | 100.0         | 100.0            |
| Opium:                             |                      |                 |                 |                      |               |                  |
| Turkey, Asiatic and European.....  |                      | 641,187         | 187,978         |                      | 87.8          | 89.0             |
| United Kingdom.....                | 121,324              | 40,207          | 4,753           | 76.0                 | 5.5           | 2.2              |
| Other countries.....               | 38,297               | 48,578          | 18,546          | 24.0                 | 6.7           | 8.8              |
| Total.....                         | 159,621              | 730,272         | 211,277         | 100.0                | 100.0         | 100.0            |
| Seeds:                             | <i>Bushels.</i>      | <i>Bushels.</i> | <i>Bushels.</i> |                      |               |                  |
| Flaxseed or linseed—               |                      |                 |                 |                      |               |                  |
| Argentina.....                     | 9,668,119            | 12,353,932      | 22,778,359      | 74.5                 | 88.0          | 92.4             |
| British India.....                 | 11,088               |                 |                 | .1                   |               |                  |
| Canada.....                        | 3,240,043            | 1,279,132       | 1,637,813       | 25.0                 | 9.1           | 6.6              |
| United Kingdom.....                | 21                   |                 |                 | ( <sup>1</sup> )     |               |                  |
| Other countries.....               | 55,205               | 403,120         | 225,018         | .4                   | 2.9           | 1.0              |
| Total.....                         | 12,974,476           | 14,036,184      | 24,641,190      | 100.0                | 100.0         | 100.0            |
| Grass seed—clover—                 | <i>Pounds.</i>       | <i>Pounds.</i>  | <i>Pounds.</i>  |                      |               |                  |
| Canada.....                        | 7,209,330            | 10,870,385      | 4,379,656       | 75.7                 | 43.4          | 17.2             |
| France.....                        | 631,911              | 8,530,878       | 12,198,012      | 6.6                  | 34.1          | 47.9             |
| Germany.....                       |                      | 27,517          | 1,505,692       |                      | .1            | 5.9              |
| Italy.....                         | 1,328,715            | 4,639,318       | 5,095,882       | 14.0                 | 18.5          | 20.0             |
| Other countries.....               | 350,010              | 973,900         | 2,307,840       | 3.7                  | 3.9           | 9.0              |
| Total.....                         | 9,519,966            | 25,041,998      | 25,487,082      | 100.0                | 100.0         | 100.0            |
| Sugar, raw cane:                   |                      |                 |                 |                      |               |                  |
| Cuba.....                          | 4,953,689,419        | 6,686,141,983   | 5,762,152,794   | 95.9                 | 95.2          | 71.8             |
| Dominican Republic.....            | 4,831,020            | 7,089,541       | 194,071,693     | .1                   | .1            | 2.3              |
| Dutch East Indies.....             | 3,272                | 30,963,112      | 546,193,950     | ( <sup>1</sup> )     | .4            | 6.8              |
| Philippine Islands.....            | 135,602,975          | 175,872,329     | 291,716,240     | 2.6                  | 2.5           | 3.6              |
| South America.....                 | 29,429,746           | 35,040,367      | 522,999,268     | .6                   | .5            | 6.5              |
| Other countries.....               | 43,284,440           | 83,682,943      | 721,534,130     | .8                   | 1.3           | 9.0              |
| Total.....                         | 5,166,840,872        | 7,019,690,475   | 8,028,668,075   | 100.0                | 100.0         | 100.0            |
| Tea:                               |                      |                 |                 |                      |               |                  |
| Canada.....                        | 2,294,155            | 2,257,012       | 1,644,840       | 1.7                  | 2.8           | 1.8              |
| China.....                         | 14,202,680           | 10,557,955      | 10,624,821      | 10.6                 | 13.0          | 11.8             |
| East Indies.....                   | 60,364,828           | 26,937,615      | 31,384,537      | 44.9                 | 33.3          | 34.8             |
| Japan.....                         | 56,480,650           | 39,959,916      | 29,749,891      | 42.0                 | 49.4          | 33.0             |
| United Kingdom.....                | 351,799              | 534,947         | 13,931,177      | .8                   | .7            | 15.4             |
| Other countries.....               | 738,089              | 665,745         | 2,911,949       | .5                   | .8            | 3.2              |
| Total.....                         | 134,418,201          | 80,962,920      | 90,246,615      | 100.0                | 100.0         | 100.0            |

<sup>1</sup>Less than 0.05 of 1 per cent.

TABLE 392.—Origin of principal farm products imported into the United States, 1918-1920—Continued.

| Article and country of origin.     | Quantity.            |                   |                   | Per cent of total.   |               |               |
|------------------------------------|----------------------|-------------------|-------------------|----------------------|---------------|---------------|
|                                    | Year ending Dec. 31— |                   |                   | Year ending Dec. 31— |               |               |
|                                    | 1918                 | 1919              | 1920              | 1918                 | 1919          | 1920          |
| <b>VEGETABLE MATTER—Continued.</b> |                      |                   |                   |                      |               |               |
| <b>Tobacco leaf:</b>               |                      |                   |                   |                      |               |               |
| Wrapper—                           | <i>Pounds.</i>       | <i>Pounds.</i>    | <i>Pounds.</i>    | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Dutch East Indies.....             | 6,984,516            | 6,504,615         | 2,102,664         | 95.5                 | 90.9          | 21.2          |
| Netherlands.....                   | 1,315                | 109,723           | 7,720,255         | (1)                  | 1.5           | 77.8          |
| Other countries.....               | 327,269              | 530,804           | 102,106           | 4.5                  | 7.6           | 1.0           |
| Total.....                         | 7,313,100            | 7,154,142         | 9,925,025         | 100.0                | 100.0         | 100.0         |
| Other leaf—                        |                      |                   |                   |                      |               |               |
| Cuba.....                          | 20,490,954           | 21,969,643        | 23,616,999        | 26.9                 | 28.1          | 33.5          |
| Dominican Republic.....            | 18,953,603           | 6,433,478         | 4,054,261         | 24.9                 | 8.2           | 5.8           |
| Germany.....                       |                      |                   | 99,818            |                      |               | .1            |
| Greece.....                        | 17,496,045           | 20,702,622        | 9,023,777         | 23.0                 | 26.5          | 12.8          |
| Turkey, Asiatic.....               | 23,880               | 11,878,239        | 18,856,091        | (1)                  | 15.2          | 26.8          |
| Turkey, European.....              |                      | 3,094,792         | 2,980,815         |                      | 4.0           | 4.2           |
| Other countries.....               | 19,236,473           | 14,131,362        | 11,841,997        | 25.2                 | 18.0          | 16.8          |
| Total.....                         | 76,201,015           | 78,210,136        | 70,453,758        | 100.0                | 100.0         | 100.0         |
| <b>FOREST PRODUCTS.</b>            |                      |                   |                   |                      |               |               |
| <b>India rubber, crude:</b>        | <i>Pounds.</i>       | <i>Pounds.</i>    | <i>Pounds.</i>    | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i> |
| Belgium.....                       |                      | 665,001           | 1,437,642         |                      | 0.1           | 0.3           |
| Brazil.....                        | 40,332,620           | 58,845,384        | 36,981,973        | 12.4                 | 11.0          | 6.5           |
| Canada.....                        | 2,712,336            | 5,320,540         | 371,334           | .8                   | 1.0           | .1            |
| Central American States and        |                      |                   |                   |                      |               |               |
| British Honduras.....              | 387,144              | 448,827           | 200,583           | .1                   | .1            | (1)           |
| East Indies.....                   | 265,040,618          | 300,894,566       | 424,301,608       | 81.3                 | 72.9          | 74.9          |
| France.....                        | 169,318              | 2,410,319         | 3,588,662         | .1                   | .4            | .6            |
| Mexico.....                        | 2,185,809            | 963,242           | 900,411           | .7                   | .2            | .2            |
| Other South America.....           | 3,590,744            | 6,065,752         | 6,215,187         | 1.1                  | 1.3           | 1.1           |
| Portugal.....                      | 424,424              | 87,422            | 2,188,747         | .1                   | (1)           | .4            |
| United Kingdom.....                | 6,627,185            | 60,251,894        | 75,297,018        | 2.0                  | 11.2          | 13.3          |
| Other countries.....               | 4,489,130            | 9,097,474         | 15,063,001        | 1.4                  | 1.8           | 2.6           |
| Total.....                         | 325,959,308          | 535,940,421       | 586,546,136       | 100.0                | 100.0         | 100.0         |
| <b>Wood:</b>                       |                      |                   |                   |                      |               |               |
| Cabinet wood, mahogany—            | <i>M feet.</i>       | <i>M feet.</i>    | <i>M feet.</i>    |                      |               |               |
| British Africa.....                | 6,353                | 13,849            | 9,521             | 14.4                 | 32.4          | 18.1          |
| Central American States and        |                      |                   |                   |                      |               |               |
| British Honduras.....              | 22,971               | 18,556            | 26,594            | 52.1                 | 43.5          | 50.4          |
| Mexico.....                        | 10,711               | 5,610             | 6,360             | 24.3                 | 13.1          | 12.1          |
| United Kingdom.....                | 77                   | 656               | 5,088             | .2                   | 1.5           | 9.7           |
| Other countries.....               | 3,986                | 4,007             | 5,114             | 9.0                  | 9.5           | 9.7           |
| Total.....                         | 44,098               | 42,678            | 52,607            | 100.0                | 100.0         | 100.0         |
| Boards, deals, planks, and other   |                      |                   |                   |                      |               |               |
| sawed lumber—                      |                      |                   |                   |                      |               |               |
| Canada.....                        | 1,183,015            | 1,119,244         | 1,309,260         | 98.1                 | 97.8          | 97.8          |
| Other countries.....               | 23,012               | 24,943            | 29,270            | 1.9                  | 2.2           | 2.2           |
| Total.....                         | 1,206,027            | 1,144,187         | 1,338,530         | 100.0                | 100.0         | 100.0         |
| <b>Wood pulp:</b>                  | <i>Long tons.</i>    | <i>Long tons.</i> | <i>Long tons.</i> |                      |               |               |
| Canada.....                        | 508,081              | 461,392           | 584,534           | 96.4                 | 81.2          | 72.2          |
| Germany.....                       |                      |                   | 7,924             |                      |               | 1.0           |
| Norway.....                        | 5,134                | 11,163            | 30,590            | 1.0                  | 2.0           | 3.8           |
| Sweden.....                        | 700                  | 76,410            | 139,748           | .1                   | 13.5          | 17.3          |
| Other countries.....               | 2,343                | 18,902            | 46,398            | .5                   | 8.3           | 5.7           |
| Total.....                         | 516,258              | 587,872           | 809,194           | 100.0                | 100.0         | 100.0         |

<sup>1</sup> Less than 0.05 of 1 per cent.

TABLE 393.—Foreign trade of the United States in agricultural products 1852–1920.

[Compiled from reports of Foreign Commerce and Navigation of the United States. All values are gold.]

[In round thousands, i. e., 000 omitted.]

| Year ending<br>June 30— | Agricultural exports. <sup>1</sup> |   |                 | Agricultural im-<br>ports. <sup>1</sup> |   |  | Forest products. |                 |                 |   |  |
|-------------------------|------------------------------------|---|-----------------|---|---|--|------------------|-----------------|-----------------|---|--|
|                         | Domestic.                          |   | For-<br>eign.   | Total.                                  | Per<br>cent-<br>age of<br>all im-<br>ports. | Excess of agricul-<br>tural ex-<br>ports<br>(+) or of<br>imports<br>(-). | Exports.         |                 | Im-<br>ports.   | Excess<br>of ex-<br>ports<br>(+) or of<br>imports<br>(-). |  |
|                         | Total.                             | Per<br>cent-<br>age of<br>all ex-<br>ports. |                 |   |   |  | Do-<br>mestic.   | For-<br>eign.   |                 |   |  |
|                         |                                    |   |                 |   |   |  |                  |                 |                 |   |  |
| Thou-<br>sands.         | Per<br>cent.                       | Thou-<br>sands.                             | Thou-<br>sands. | Per<br>cent.                            | Thou-<br>sands.                             | Thou-<br>sands.  | Thou-<br>sands.  | Thou-<br>sands. | Thou-<br>sands. |   |  |
| Average:                |                                    |   |                 |   |   |  |                  |                 |                 |   |  |
| 1852-1856...            | \$164,895                          | 80.9  | \$3,060         | \$77,847                                | 29.1 +                                      | \$95,108   | \$6,819          | \$694           | \$3,256         | + \$4,257   |  |
| 1857-1861...            | 215,709                            | 81.1  | 10,174          | 121,018                                 | 38.2 +                                      | 104,865  | 9,995            | 962             | 6,942           | + 4,015   |  |
| 1862-1866...            | 143,866                            | 75.7  | 9,288           | 122,222                                 | 43.0 +                                      | 35,932   | 7,366            | 798             | 8,511           | + 3,847   |  |
| 1867-1871...            | 250,713                            | 76.9  | 8,538           | 179,774                                 | 42.3 +                                      | 79,477   | 11,775           | 691             | 14,513          | + 2,347   |  |
| 1872-1876...            | 396,666                            | 78.5  | 8,853           | 265,156                                 | 46.5 +                                      | 142,564  | 17,907           | 960             | 19,728          | + 852   |  |
| 1877-1881...            | 591,351                            | 80.4  | 8,632           | 266,384                                 | 50.4 +                                      | 335,699  | 17,579           | 553             | 22,006          | + 3,874   |  |
| 1882-1886...            | 557,473                            | 76.3  | 9,340           | 311,708                                 | 46.8 +                                      | 255,106  | 24,705           | 1,417           | 34,253          | + 8,131   |  |
| 1887-1891...            | 573,287                            | 74.7  | 6,982           | 366,950                                 | 43.3 +                                      | 213,319  | 26,061           | 1,443           | 39,647          | + 12,144  |  |
| 1892-1896...            | 638,748                            | 73.0  | 8,446           | 398,332                                 | 51.6 +                                      | 248,863  | 29,276           | 1,707           | 45,091          | + 14,107  |  |
| 1897-1901...            | 827,560                            | 65.9  | 10,962          | 376,550                                 | 50.2 +                                      | 461,978  | 45,061           | 3,283           | 52,327          | + 3,083   |  |
| 1902-1906...            | 879,541                            | 59.5  | 11,922          | 487,881                                 | 46.3 +                                      | 403,583  | 63,585           | 3,350           | 79,838          | + 12,451  |  |
| 1907-1911...            | 975,399                            | 53.9  | 12,126          | 634,571                                 | 45.2 +                                      | 352,954  | 88,764           | 6,488           | 137,051         | + 41,799  |  |
| 1912-1916...            | 1,256,452                          | 45.1  | 24,275          | 924,699                                 | 50.1 +                                      | 356,028  | 92,129           | 5,563           | 185,390         | + 87,698  |  |
| 1901.....               | 951,628                            | 65.2  | 11,293          | 391,031                                 | 47.6 +                                      | 570,990  | 55,369           | 3,509           | 57,144          | + 1,825   |  |
| 1902.....               | 857,114                            | 63.2  | 10,308          | 413,745                                 | 45.8 +                                      | 453,677  | 48,929           | 3,609           | 59,137          | + 6,049   |  |
| 1903.....               | 878,481                            | 63.1  | 13,505          | 456,199                                 | 44.5 +                                      | 435,787  | 58,734           | 2,865           | 71,478          | + 9,879   |  |
| 1904.....               | 859,160                            | 59.5  | 12,626          | 461,435                                 | 46.6 +                                      | 410,350  | 70,086           | 4,177           | 79,619          | + 5,356   |  |
| 1905.....               | 826,905                            | 55.4  | 12,317          | 553,851                                 | 49.6 +                                      | 285,370  | 63,199           | 3,790           | 92,631          | + 25,691  |  |
| 1906.....               | 976,047                            | 56.7  | 10,856          | 554,175                                 | 45.2 +                                      | 432,728  | 76,975           | 4,809           | 96,462          | + 14,678  |  |
| 1907.....               | 1,054,405                          | 56.9  | 11,614          | 626,337                                 | 43.7 +                                      | 439,182  | 92,949           | 5,500           | 122,421         | + 23,972  |  |
| 1908.....               | 1,017,396                          | 55.5  | 10,299          | 539,690                                 | 45.2 +                                      | 488,005  | 90,362           | 4,570           | 97,733          | + 2,801   |  |
| 1909.....               | 903,238                            | 55.1  | 9,585           | 638,613                                 | 48.7 +                                      | 274,210  | 72,442           | 4,983           | 123,920         | + 46,495  |  |
| 1910.....               | 871,158                            | 50.9  | 14,470          | 687,509                                 | 44.2 +                                      | 198,119  | 85,030           | 9,802           | 178,672         | + 84,040  |  |
| 1911.....               | 1,030,794                          | 51.2  | 14,665          | 680,205                                 | 44.5 +                                      | 365,254  | 103,039          | 7,587           | 162,312         | + 51,086  |  |
| 1912.....               | 1,050,627                          | 48.4  | 12,108          | 783,457                                 | 47.4 +                                      | 279,277  | 108,122          | 6,413           | 172,523         | + 57,988  |  |
| 1913.....               | 1,123,652                          | 46.3  | 15,029          | 815,301                                 | 45.0 +                                      | 323,381  | 124,836          | 7,432           | 180,502         | + 48,235  |  |
| 1914.....               | 1,113,974                          | 47.8  | 17,729          | 924,247                                 | 48.8 +                                      | 207,456  | 106,979          | 4,518           | 155,201         | + 43,765  |  |
| 1915.....               | 1,475,933                          | 54.3  | 34,420          | 910,786                                 | 54.4 +                                      | 599,571  | 52,554           | 5,089           | 165,849         | + 108,207   |  |
| 1916.....               | 1,513,071                          | 35.5  | 42,088          | 1,189,705                               | 54.1 +                                      | 370,454  | 68,155           | 4,364           | 252,851         | + 180,331   |  |
| 1917.....               | 1,968,253                          | 31.6  | 37,040          | 1,404,972                               | 52.3 +                                      | 600,921  | 68,919           | 11,172          | 322,699         | + 242,609   |  |
| 1918.....               | 2,280,466                          | 39.1  | 36,553          | 1,618,874                               | 55.0 +                                      | 701,144  | 87,181           | 6,066           | 335,083         | + 241,787   |  |
| Calendar year:          |                                    |   |                 |   |   |  |                  |                 |                 |   |  |
| 1918.....               | 2,756,665                          | 45.6  | 73,959          | 1,671,196                               | 55.1 +                                      | 1,159,428  | 88,022           | 5,891           | 279,605         | + 185,692   |  |
| 1919.....               | 4,107,159                          | 53.0  | 122,561         | 2,392,880                               | 61.3 +                                      | 1,836,339  | 150,324          | 6,899           | 374,455         | + 217,232   |  |
| 1920 (pre-<br>liminary) | 3,460,620                          | 42.9  | 105,817         | 3,011,368                               | 57.0 +                                      | 561,069  | 191,848          | 10,350          | 521,332         | + 319,136   |  |

<sup>1</sup> Not including forest products.

# MISCELLANEOUS AGRICULTURAL STATISTICS.

## CROP SUMMARY.

The December estimates of the Crop Reporting Board of the Bureau of Markets and Crop Estimates of the acreage, production, and value (based on prices paid to farmers on Dec. 1) of important farms crops of the United States in 1921, 1920, and 1919, based on the reports of the correspondents and agents of the Bureau, are as follows (1919 figures revised):

TABLE 394.—Crop summary, 1921, 1920, and 1919.

| Crop.                  | Acreage.    | Production. |               |          | Farm value Dec. 1. |                 |
|------------------------|-------------|-------------|---------------|----------|--------------------|-----------------|
|                        |             | Per acre.   | Total.        | Unit.    | Per unit.          | Total.          |
| <b>Corn:</b>           |             |             |               |          | <i>Cents.</i>      | <i>Dollars.</i> |
| 1921.....              | 103,850,000 | 28.7        | 3,080,372,000 | Bush.... | 42.3               | 1,302,670,000   |
| 1920.....              | 101,628,000 | 31.5        | 3,208,584,000 | ..do.... | 67.0               | 2,150,332,000   |
| 1919.....              | 97,170,000  | 28.9        | 2,811,302,000 | ..do.... | 134.5              | 3,780,597,000   |
| <b>Winter wheat:</b>   |             |             |               |          |                    |                 |
| 1921.....              | 42,702,000  | 13.7        | 587,032,000   | ..do.... | 95.2               | 558,725,000     |
| 1920.....              | 40,010,000  | 15.3        | 610,597,000   | ..do.... | 148.6              | 907,291,000     |
| 1919.....              | 50,494,000  | 15.1        | 760,377,000   | ..do.... | 210.5              | 1,600,895,000   |
| <b>Spring wheat:</b>   |             |             |               |          |                    |                 |
| 1921.....              | 19,708,000  | 10.5        | 207,861,000   | ..do.... | 85.8               | 178,343,000     |
| 1920.....              | 21,127,000  | 10.5        | 222,430,000   | ..do.... | 130.4              | 289,972,000     |
| 1919.....              | 25,200,000  | 8.2         | 207,602,000   | ..do.... | 230.9              | 479,251,000     |
| <b>All wheat:</b>      |             |             |               |          |                    |                 |
| 1921.....              | 62,408,000  | 12.7        | 794,893,000   | ..do.... | 92.7               | 737,068,000     |
| 1920.....              | 61,143,000  | 13.6        | 833,027,000   | ..do.... | 143.7              | 1,197,263,000   |
| 1919.....              | 75,694,000  | 12.8        | 967,979,000   | ..do.... | 214.9              | 2,080,036,000   |
| <b>Oats:</b>           |             |             |               |          |                    |                 |
| 1921.....              | 44,820,000  | 23.7        | 1,060,737,000 | ..do.... | 30.3               | 321,540,000     |
| 1920.....              | 42,491,000  | 35.2        | 1,490,281,000 | ..do.... | 43.0               | 638,311,000     |
| 1919.....              | 40,359,000  | 29.3        | 1,181,030,000 | ..do.... | 70.4               | 833,922,000     |
| <b>Barley:</b>         |             |             |               |          |                    |                 |
| 1921.....              | 7,210,000   | 20.9        | 151,181,000   | ..do.... | 42.2               | 63,788,000      |
| 1920.....              | 7,000,000   | 24.9        | 180,332,000   | ..do.... | 71.3               | 135,083,000     |
| 1919.....              | 6,720,000   | 22.0        | 147,608,000   | ..do.... | 120.6              | 178,080,000     |
| <b>Rye:</b>            |             |             |               |          |                    |                 |
| 1921.....              | 4,228,000   | 13.7        | 57,918,000    | ..do.... | 70.2               | 40,680,000      |
| 1920.....              | 4,409,000   | 13.7        | 60,490,000    | ..do.... | 126.8              | 76,693,000      |
| 1919.....              | 6,307,000   | 12.0        | 75,483,000    | ..do.... | 133.2              | 100,573,000     |
| <b>Buckwheat:</b>      |             |             |               |          |                    |                 |
| 1921.....              | 671,000     | 21.0        | 14,079,000    | ..do.... | 81.2               | 11,438,000      |
| 1920.....              | 701,000     | 18.7        | 13,142,000    | ..do.... | 129.3              | 16,863,000      |
| 1919.....              | 700,000     | 20.6        | 14,399,000    | ..do.... | 146.1              | 21,032,000      |
| <b>Flaxseed:</b>       |             |             |               |          |                    |                 |
| 1921.....              | 1,165,000   | 7.0         | 8,112,000     | ..do.... | 144.6              | 11,732,000      |
| 1920.....              | 1,757,000   | 6.1         | 10,774,000    | ..do.... | 176.7              | 19,039,000      |
| 1919.....              | 1,603,000   | 4.8         | 7,256,000     | ..do.... | 438.8              | 31,802,000      |
| <b>Rice:</b>           |             |             |               |          |                    |                 |
| 1921.....              | 911,000     | 40.1        | 36,515,000    | ..do.... | 95.3               | 34,802,000      |
| 1920.....              | 1,336,000   | 39.0        | 52,066,000    | ..do.... | 119.1              | 62,036,000      |
| 1919.....              | 1,063,000   | 38.5        | 41,985,000    | ..do.... | 266.6              | 111,913,000     |
| <b>Potatoes:</b>       |             |             |               |          |                    |                 |
| 1921.....              | 3,815,000   | 90.9        | 346,823,000   | ..do.... | 111.1              | 385,192,000     |
| 1920.....              | 3,657,000   | 110.3       | 403,296,000   | ..do.... | 114.5              | 461,778,000     |
| 1919.....              | 3,542,000   | 91.2        | 322,867,000   | ..do.... | 159.5              | 514,855,000     |
| <b>Sweet potatoes:</b> |             |             |               |          |                    |                 |
| 1921.....              | 1,066,000   | 92.6        | 98,660,000    | ..do.... | 88.1               | 89,910,000      |
| 1920.....              | 992,000     | 104.8       | 103,925,000   | ..do.... | 113.4              | 117,834,000     |
| 1919.....              | 941,000     | 103.2       | 97,120,000    | ..do.... | 134.4              | 130,514,000     |
| <b>Hay, tame:</b>      |             |             |               |          |                    |                 |
| 1921.....              | 58,712,000  | 1.39        | 81,567,000    | Ton..... | \$12.13            | 989,693,000     |
| 1920.....              | 58,101,000  | 1.51        | 87,855,000    | ..do.... | \$7.76             | 1,560,235,000   |
| 1919.....              | 56,888,000  | 1.52        | 86,359,000    | ..do.... | \$20.03            | 1,734,035,000   |
| <b>Hay, wild:</b>      |             |             |               |          |                    |                 |
| 1921.....              | 15,483,000  | .98         | 15,235,000    | ..do.... | \$4.63             | 101,083,000     |
| 1920.....              | 15,787,000  | 1.11        | 17,460,000    | ..do.... | \$11.35            | 198,115,000     |
| 1919.....              | 17,150,000  | 1.07        | 18,401,000    | ..do.... | \$16.50            | 303,639,000     |
| <b>All hay:</b>        |             |             |               |          |                    |                 |
| 1921.....              | 74,225,000  | 1.30        | 96,802,000    | ..do.... | \$11.27            | 1,090,776,000   |
| 1920.....              | 73,888,000  | 1.43        | 105,315,000   | ..do.... | \$16.70            | 1,758,350,000   |
| 1919.....              | 74,038,000  | 1.41        | 104,760,000   | ..do.... | \$19.45            | 2,037,724,000   |
| <b>Tobacco:</b>        |             |             |               |          |                    |                 |
| 1921.....              | 1,435,000   | 749.4       | 1,075,418,000 | Lb.....  | 19.9               | 213,846,000     |
| 1920.....              | 1,960,000   | 807.3       | 1,582,225,000 | ..do.... | 21.2               | 335,675,000     |
| 1919.....              | 1,951,000   | 751.1       | 1,465,481,000 | ..do.... | 39.0               | 570,888,000     |
| <b>Cotton:</b>         |             |             |               |          |                    |                 |
| 1921.....              | 30,509,000  | 124.5       | 7,953,641     | Bale.... | 116.2              | 643,933,000     |
| 1920.....              | 35,873,000  | 178.4       | 13,439,603    | ..do.... | 13.9               | 933,658,000     |
| 1919.....              | 33,666,000  | 161.5       | 11,420,763    | ..do.... | 35.6               | 2,034,668,000   |
| <b>Cotton seed:</b>    |             |             |               |          |                    |                 |
| 1921.....              |             |             | 3,704,000     | Ton..... | \$29.15            | 107,972,000     |
| 1920.....              |             |             | 5,970,000     | ..do.... | \$26.00            | 155,220,000     |
| 1919.....              |             |             | 5,074,000     | ..do.... | \$72.65            | 368,626,000     |

1 Pounds per acre and cents per pound.

## CROP SUMMARY—Continued.

TABLE 394.—Crop summary, 1921, 1920, and 1919—Continued.

| Crop.                                | Acreage.      | Production. |               |           | Farm value Dec. 1. |                 |
|--------------------------------------|---------------|-------------|---------------|-----------|--------------------|-----------------|
|                                      |               | Per acre.   | Total.        | Unit.     | Per unit.          | Total.          |
| Clover seed:                         |               |             |               |           | <i>Cents.</i>      | <i>Dollars.</i> |
| 1921.....                            | 869,000       | 1.6         | 1,411,000     | Bush....  | \$10.27            | 14,488,000      |
| 1920.....                            | 1,082,000     | 1.8         | 1,944,000     | ...do.... | \$11.95            | 23,227,000      |
| 1919.....                            | 942,000       | 1.6         | 1,484,000     | ...do.... | \$26.75            | 39,700,000      |
| Sugar beets:                         |               |             |               |           |                    |                 |
| 1921 <sup>a</sup> .....              | 815,000       | 9.55        | 7,782,000     | Tom....   | \$6.32             | 49,154,000      |
| 1920.....                            | 872,000       | 9.79        | 8,538,000     | ...do.... | \$11.63            | 99,324,000      |
| Beet sugar:                          |               |             |               |           |                    |                 |
| 1921.....                            | 814,938       | 2.504       | 2,040,978,000 | Lb.....   |                    |                 |
| 1920.....                            | 871,676       | 2.499       | 2,178,042,000 | ...do.... |                    |                 |
| Cane sugar (La.):                    |               |             |               |           |                    |                 |
| 1921.....                            | 226,366       | 2.866       | 648,862,000   | ...do.... |                    |                 |
| 1920.....                            | 182,843       | 1.850       | 338,254,000   | ...do.... |                    |                 |
| Maple sugar and sirup<br>(as sugar): |               |             |               |           |                    |                 |
| 1921.....                            | \$ 15,234,100 | 4 1.58      | 24,097,400    | ...do.... | 25.7               | 6,193,032       |
| 1920.....                            | \$ 17,638,013 | 4 1.92      | 33,768,300    | ...do.... | 31.6               | 10,670,782      |
| Sorghum sirup:                       |               |             |               |           |                    |                 |
| 1921.....                            | 518,000       | 87.9        | 45,554,000    | Gall....  | 62.9               | 28,670,000      |
| 1920.....                            | 536,000       | 92.4        | 49,505,000    | ...do.... | 106.9              | 52,943,000      |
| 1919.....                            | 487,000       | 80.9        | 39,413,000    | ...do.... | 110.8              | 43,683,000      |
| Peanuts:                             |               |             |               |           |                    |                 |
| 1921.....                            | 1,212,000     | 673.7       | 816,465,000   | Lb.....   | 4.0                | 32,288,000      |
| 1920.....                            | 1,181,000     | 712.5       | 841,474,000   | ...do.... | 5.3                | 44,256,000      |
| 1919.....                            | 1,132,000     | 691.9       | 783,273,000   | ...do.... | 9.3                | 73,094,000      |
| Beans (7 States):                    |               |             |               |           |                    |                 |
| 1921.....                            | 771,000       | 11.8        | 9,118,000     | Bush....  | \$2.66             | 24,298,000      |
| 1920.....                            | 838,000       | 10.8        | 9,077,000     | ...do.... | \$2.95             | 26,806,000      |
| 1919.....                            | 1,060,000     | 12.6        | 13,349,000    | ...do.... | \$4.26             | 56,811,000      |
| Kafirs (10 States):                  |               |             |               |           |                    |                 |
| 1921.....                            | 4,652,000     | 24.7        | 115,110,000   | ...do.... | 39.3               | 45,260,000      |
| 1920.....                            | 5,120,000     | 26.8        | 137,408,000   | ...do.... | 92.9               | 127,629,000     |
| 1919.....                            | 5,080,000     | 25.8        | 130,734,000   | ...do.... | 127.4              | 166,510,000     |
| Broom corn (7 States):               |               |             |               |           |                    |                 |
| 1921.....                            | 207,400       | 338.4       | 35,100        | Tom....   | \$72.76            | 2,554,000       |
| 1920.....                            | 275,500       | 265.0       | 36,500        | ...do.... | \$126.16           | 4,605,000       |
| 1919.....                            | 352,000       | 303.4       | 53,400        | ...do.... | \$154.57           | 8,254,000       |
| Onions (22 States):                  |               |             |               |           |                    |                 |
| 1921.....                            | 55,829        | 226.6       | 12,652,000    | Bush....  | 213.1              | 26,966,000      |
| 1920.....                            | 64,650        | 362.5       | 23,435,000    | ...do.... | 129.6              | 30,377,000      |
| Cabbage (25 States):                 |               |             |               |           |                    |                 |
| 1921.....                            | 94,035        | 6.4         | 606,274       | Tom....   | \$48.02            | 29,116,000      |
| 1920.....                            | 115,838       | 8.9         | 1,039,662     | ...do.... | \$33.99            | 35,001,000      |
| Hops (4 States):                     |               |             |               |           |                    |                 |
| 1921.....                            | 28,000        | 1,040.7     | 29,140,000    | Lb.....   | 24.4               | 7,117,000       |
| 1920.....                            | 28,000        | 1,224.3     | 34,230,000    | ...do.... | 35.7               | 12,236,000      |
| 1919.....                            | 21,000        | 1,189.0     | 24,970,000    | ...do.... | 77.6               | 19,376,000      |
| Cranberries (3 States):              |               |             |               |           |                    |                 |
| 1921.....                            | 25,000        | 14.9        | 373,000       | Bbl....   | \$16.60            | 6,192,000       |
| 1920.....                            | 25,000        | 18.0        | 449,000       | ...do.... | \$12.28            | 5,514,000       |
| 1919.....                            | 25,000        | 22.0        | 549,000       | ...do.... | \$8.37             | 4,597,000       |
| Apples, total:                       |               |             |               |           |                    |                 |
| 1921.....                            |               |             | 98,097,000    | Bush....  | 107.8              | 164,631,000     |
| 1920.....                            |               |             | 223,677,000   | ...do.... | 114.8              | 256,699,000     |
| 1919.....                            |               |             | 142,086,000   | ...do.... | 183.6              | 260,939,000     |
| Apples, commercial:                  |               |             |               |           |                    |                 |
| 1921.....                            |               |             | 21,204,000    | Bbl....   | \$4.59             | 97,322,000      |
| 1920.....                            |               |             | 33,905,000    | ...do.... | \$3.74             | 126,800,000     |
| 1919.....                            |               |             | 26,159,000    | ...do.... | \$5.34             | 139,698,000     |
| Peaches:                             |               |             |               |           |                    |                 |
| 1921.....                            |               |             | 32,733,000    | Bush....  | 159.4              | 52,176,000      |
| 1920.....                            |               |             | 45,620,000    | ...do.... | 210.4              | 95,970,000      |
| 1919.....                            |               |             | 53,178,000    | ...do.... | 189.0              | 100,485,000     |
| Pears:                               |               |             |               |           |                    |                 |
| 1921.....                            |               |             | 10,705,000    | ...do.... | 171.3              | 18,342,000      |
| 1920.....                            |               |             | 16,805,000    | ...do.... | 165.8              | 27,885,000      |
| 1919.....                            |               |             | 15,101,000    | ...do.... | 184.4              | 27,862,000      |
| Oranges (2 States):                  |               |             |               |           |                    |                 |
| 1921.....                            |               |             | 30,700,000    | Box....   | \$2.08             | 63,850,000      |
| 1920.....                            |               |             | 29,700,000    | ...do.... | \$2.19             | 64,908,000      |
| 1919.....                            |               |             | 22,528,000    | ...do.... | \$2.67             | 60,202,000      |
| Soy beans:                           |               |             |               |           |                    |                 |
| 1921.....                            | 186,000       | 15.1        | 2,815,000     | Bush....  | 216.0              | 6,080,000       |
| 1920.....                            | 156,000       | 14.6        | 2,278,000     | ...do.... | 304.0              | 6,928,000       |
| 1919.....                            | 155,000       | 13.2        | 2,045,000     | ...do.... | 333.2              | 6,814,000       |

<sup>a</sup> Including beets grown in Canada for United States factories.<sup>b</sup> Trees tapped.<sup>c</sup> Per tree.<sup>d</sup> Mar. 15.<sup>e</sup> Pounds.



## CROP SUMMARY—Continued.

TABLE 394.—*Crop summary, 1921, 1920, and 1919—Continued.*

| Crop.     | Acreage.    | Production. |           |          | Farm value Dec. 1. |                 |
|-----------|-------------|-------------|-----------|----------|--------------------|-----------------|
|           |             | Per acre.   | Total.    | Unit.    | Per unit.          | Total.          |
| Cow peas: |             |             |           |          | <i>Cents.</i>      | <i>Dollars.</i> |
| 1921..... | 1,133,000   | 8.5         | 9,581,000 | Bush.... | 177.0              | 16,960,000      |
| 1920..... | 990,000     | 9.0         | 8,904,000 | do.....  | 233.4              | 20,796,000      |
| 1919..... | 959,000     | 6.3         | 6,026,000 | do.....  | 274.4              | 16,533,000      |
| Total:    |             |             |           |          |                    |                 |
| 1921..... | 347,141,630 |             |           |          |                    | 5,646,682,000   |
| 1920..... | 348,977,831 |             |           |          |                    | 9,053,878,000   |
| 1919..... | 354,769,908 |             |           |          |                    | 18,820,515,000  |

## VALUE OF FARM PRODUCTS.

TABLE 395.—*Estimated value of farm products, 1879-1921, based on prices at the farm.*

| Year.              | Total, gross<br>(to be read as<br>index<br>numbers). | Crops.          |                              | Animals and animal<br>products. |                              |
|--------------------|--|-----------------|------------------------------|---------------------------------|------------------------------|
|                    |  | Value.          | Percent-<br>age of<br>total. | Value.                          | Percent-<br>age of<br>total. |
| 1879 (census)..... | \$3,218,640,987                                      |                 |                              |                                 |                              |
| 1889 (census)..... | 2,460,107,454  |                 |                              |                                 |                              |
| 1897.....          | 3,961,000,000  | \$2,519,000,000 | 63.6                         | \$1,442,000,000                 | 36.4                         |
| 1898.....          | 4,339,000,000  | 2,760,000,000   | 63.6                         | 1,579,000,000                   | 36.4                         |
| 1899 (census)..... | 4,717,069,973  | 3,098,704,418   | 65.6                         | 1,718,000,000                   | 35.4                         |
| 1900.....          | 5,010,000,000  | 3,192,000,000   | 63.7                         | 1,818,000,000                   | 36.3                         |
| 1901.....          | 5,302,000,000  | 3,385,000,000   | 63.8                         | 1,917,000,000                   | 36.2                         |
| 1902.....          | 5,595,000,000  | 3,578,000,000   | 64.0                         | 2,016,000,000                   | 36.0                         |
| 1903.....          | 5,887,000,000  | 3,772,000,000   | 64.1                         | 2,116,000,000                   | 35.9                         |
| 1904.....          | 6,122,000,000  | 3,982,000,000   | 65.0                         | 2,140,000,000                   | 35.0                         |
| 1905.....          | 6,274,000,000  | 4,013,000,000   | 64.0                         | 2,261,000,000                   | 36.0                         |
| 1906.....          | 6,764,000,000  | 4,263,000,000   | 63.0                         | 2,501,000,000                   | 37.0                         |
| 1907.....          | 7,488,000,000  | 4,781,000,000   | 63.8                         | 2,707,000,000                   | 36.4                         |
| 1908.....          | 7,891,000,000  | 5,098,000,000   | 64.6                         | 2,793,000,000                   | 35.4                         |
| 1909 (census)..... | 8,558,161,223  | 5,437,161,223   | 64.1                         | 3,071,000,000                   | 35.9                         |
| 1910.....          | 9,037,000,000  | 5,498,000,000   | 60.7                         | 3,551,000,000                   | 39.3                         |
| 1911.....          | 9,819,000,000  | 5,562,000,000   | 62.1                         | 3,257,000,000                   | 36.0                         |
| 1912.....          | 9,343,000,000  | 5,542,000,000   | 62.5                         | 3,501,000,000                   | 37.5                         |
| 1913.....          | 9,850,000,000  | 6,133,000,000   | 62.3                         | 3,717,000,000                   | 37.7                         |
| 1914.....          | 9,895,000,000  | 6,112,000,000   | 61.8                         | 3,783,000,000                   | 38.2                         |
| 1915.....          | 10,775,000,000                                       | 6,907,000,000   | 64.1                         | 3,868,000,000                   | 35.9                         |
| 1916.....          | 13,408,000,000                                       | 9,054,000,000   | 67.5                         | 4,352,000,000                   | 32.5                         |
| 1917.....          | 19,331,000,000                                       | 13,479,000,000  | 69.7                         | 5,852,000,000                   | 30.3                         |
| 1918.....          | 22,480,000,000                                       | 14,831,000,000  | 65.8                         | 8,149,000,000                   | 36.2                         |
| 1919.....          | 23,783,000,000                                       | 15,423,000,000  | 64.8                         | 8,361,000,000                   | 35.2                         |
| 1920.....          | 18,263,000,000                                       | 10,909,000,000  | 59.7                         | 7,354,000,000                   | 40.3                         |
| 1921.....          | 12,366,000,000                                       | 7,028,000,000   | 56.8                         | 5,339,000,000                   | 43.2                         |

## CROP VALUE PER ACRE.

TABLE 396.—*Yearly value per acre of 10 crops combined.*

Corn, wheat, oats, barley, rye, buckwheat, potatoes, hay, tobacco, and cotton, which comprise nearly 90 per cent of the area in all field crops, the average value of which closely approximates the value per acre of the aggregate of all crops.]

|           |         |           |         |           |        |           |         |
|-----------|---------|-----------|---------|-----------|--------|-----------|---------|
| 1896..... | \$14.17 | 1880..... | \$13.01 | 1894..... | \$9.06 | 1908..... | \$15.32 |
| 1897..... | 15.09   | 1881..... | 13.10   | 1895..... | 8.12   | 1909..... | 16.00   |
| 1898..... | 14.17   | 1882..... | 12.93   | 1896..... | 7.94   | 1910..... | 15.53   |
| 1899..... | 14.07   | 1883..... | 10.93   | 1897..... | 9.07   | 1911..... | 15.36   |
| 1900..... | 15.40   | 1884..... | 9.95    | 1898..... | 9.00   | 1912..... | 16.09   |
| 1871..... | 15.74   | 1885..... | 9.72    | 1899..... | 9.13   | 1913..... | 16.49   |
| 1872..... | 14.68   | 1886..... | 9.41    | 1900..... | 10.31  | 1914..... | 16.44   |
| 1873..... | 14.19   | 1887..... | 10.14   | 1901..... | 11.43  | 1915..... | 17.18   |
| 1874..... | 13.25   | 1888..... | 10.30   | 1902..... | 12.07  | 1916..... | 22.58   |
| 1875..... | 12.20   | 1889..... | 8.99    | 1903..... | 12.62  | 1917..... | 33.27   |
| 1876..... | 10.80   | 1890..... | 11.03   | 1904..... | 13.26  | 1918..... | 33.73   |
| 1877..... | 12.00   | 1891..... | 11.78   | 1905..... | 13.28  | 1919..... | 35.74   |
| 1878..... | 10.37   | 1892..... | 10.10   | 1906..... | 13.46  | 1920..... | 23.26   |
| 1879..... | 13.26   | 1893..... | 9.50    | 1907..... | 14.74  | 1921..... | 14.44   |

## AGGREGATE CROP-VALUE COMPARISONS.

TABLE 397.—Value of 22 crops and hypothetical value of all crops, with rank, 1919-1921.

The following tabulation gives the estimated total value of 22 crops—corn, wheat, oats, barley, rye, buckwheat, flaxseed, rice, potatoes, sweet potatoes, all hay, tobacco, lint cotton, beans, broom corn, grain sorghums, hops, oranges, clover seed, peanuts, cranberries, and apples—in the United States, by States, in 1921, 1920, and 1919 (census); the value of all crops in 1919 (census); and the hypothetical value of all crops in several years, based upon ratio of the 22 crops to all crops in census year; also rank of States. The slight differences in the total value of crops in the United States between Tables 395 and 397 are due to different methods of estimating. In Table 397, where each State is shown separately, a more detailed method is used than is practicable in Table 395.

[Values in thousands of dollars; i. e., 000 omitted.]

| State.  | Value of 22 crops. |           |                | Value all crops 1919 (census) <sup>1</sup> . | Ratio value 22 crops to all crops in census 1919. | Hypothetical value of all crops. |            |                    | Rank.     |            |
|---------|--------------------|-----------|----------------|--|---|----------------------------------|------------|--------------------|-----------|------------|
|         | 1921               | 1920      | 1919 (census). |  |   | 1921                             | 1920       | 1915-1919 average. | 1921      |            |
|         |                    |           |                |  |   |                                  |            |                    | 22 crops. | All crops. |
| Me.     | 60,691             | 65,299    | 91,982         | 100,152                                      | 92  | 65,968                           | 70,977     | 64,739             | 31        | 33         |
| N. H.   | 17,848             | 19,482    | 18,479         | 23,510                                       | 79  | 22,592                           | 24,661     | 21,252             | 44        | 43         |
| Vt.     | 21,496             | 42,344    | 36,335         | 48,000                                       | 77  | 40,904                           | 54,992     | 43,021             | 39        | 40         |
| Mass.   | 33,105             | 40,041    | 36,601         | 53,701                                       | 68  | 48,684                           | 58,884     | 50,840             | 38        | 37         |
| R. I.   | 2,802              | 4,023     | 3,680          | 5,340  | 69  | 4,061                            | 5,830      | 5,613              | 48        | 48         |
| Conn.   | 38,691             | 38,952    | 36,006         | 44,492                                       | 81  | 47,767                           | 48,089     | 43,705             | 35        | 36         |
| N. Y.   | 207,682            | 326,917   | 321,598        | 417,047                                      | 77  | 269,717                          | 424,568    | 364,353            | 5         | 4          |
| N. J.   | 37,500             | 54,927    | 61,253         | 87,464                                       | 70  | 53,571                           | 78,467     | 78,704             | 37        | 35         |
| Pa.     | 195,334            | 312,116   | 350,991        | 409,969                                      | 86  | 227,138                          | 362,926    | 347,043            | 7         | 8          |
| Del.    | 7,654              | 13,912    | 16,516         | 23,059                                       | 72  | 10,681                           | 19,322     | 22,593             | 47        | 46         |
| Md.     | 38,420             | 72,029    | 88,066         | 110,119                                      | 80  | 48,025                           | 90,036     | 94,641             | 36        | 33         |
| Va.     | 111,429            | 194,693   | 247,458        | 292,824                                      | 85  | 131,068                          | 229,051    | 213,935            | 26        | 26         |
| W. Va.  | 46,999             | 77,146    | 78,143         | 96,537                                       | 81  | 58,023                           | 95,242     | 99,078             | 34        | 34         |
| N. C.   | 228,706            | 307,257   | 438,892        | 503,229                                      | 87  | 262,880                          | 353,169    | 369,101            | 4         | 5          |
| S. C.   | 119,872            | 205,063   | 360,025        | 437,122                                      | 82  | 146,185                          | 250,077    | 316,283            | 25        | 24         |
| Ga.     | 142,389            | 231,884   | 430,270        | 540,614                                      | 80  | 177,988                          | 289,855    | 467,684            | 17        | 14         |
| Fla.    | 31,109             | 45,245    | 49,521         | 80,257                                       | 62  | 50,176                           | 72,976     | 78,900             | 40        | 36         |
| Ohio    | 184,845            | 332,109   | 526,433        | 607,038                                      | 87  | 212,466                          | 381,734    | 447,023            | 9         | 10         |
| Ind.    | 147,620            | 275,037   | 449,079        | 497,230                                      | 90  | 164,022                          | 305,597    | 406,164            | 16        | 17         |
| Ill.    | 271,321            | 447,398   | 797,893        | 884,738                                      | 92  | 294,914                          | 486,302    | 706,520            | 2         | 3          |
| Mich.   | 150,883            | 256,163   | 329,651        | 404,015                                      | 82  | 184,004                          | 312,394    | 304,959            | 14        | 13         |
| Wis.    | 178,098            | 315,876   | 360,404        | 445,348                                      | 81  | 220,615                          | 389,970    | 353,573            | 10        | 9          |
| Minn.   | 174,949            | 277,347   | 450,327        | 506,020                                      | 89  | 198,572                          | 311,026    | 429,358            | 11        | 11         |
| Iowa    | 337,932            | 436,153   | 820,126        | 890,391                                      | 92  | 238,643                          | 474,079    | 668,423            | 3         | 6          |
| Mo.     | 173,082            | 318,137   | 496,261        | 559,048                                      | 89  | 194,474                          | 357,457    | 410,027            | 12        | 12         |
| N. Dak. | 127,793            | 207,989   | 278,315        | 301,783                                      | 92  | 138,905                          | 226,075    | 282,871            | 21        | 25         |
| S. Dak. | 101,827            | 133,424   | 238,379        | 311,007                                      | 93  | 112,717                          | 197,230    | 312,505            | 27        | 27         |
| Nebr.   | 162,485            | 280,627   | 491,339        | 519,730                                      | 95  | 171,037                          | 301,713    | 423,054            | 18        | 16         |
| Kans.   | 207,878            | 357,216   | 536,408        | 598,023                                      | 91  | 228,108                          | 392,545    | 445,676            | 6         | 7          |
| Ky.     | 133,759            | 219,648   | 310,224        | 348,055                                      | 89  | 150,291                          | 247,020    | 304,055            | 18        | 22         |
| Tenn.   | 132,406            | 191,124   | 263,797        | 318,285                                      | 83  | 159,525                          | 230,270    | 251,288            | 20        | 19         |
| Ala.    | 126,990            | 147,068   | 245,271        | 304,349                                      | 81  | 156,778                          | 181,565    | 259,615            | 23        | 20         |
| Miss.   | 124,080            | 143,542   | 275,539        | 336,207                                      | 83  | 149,494                          | 172,942    | 263,995            | 24        | 23         |
| La.     | 78,328             | 98,682    | 147,290        | 206,183                                      | 71  | 103,279                          | 138,989    | 199,810            | 28        | 28         |
| Tex.    | 352,311            | 500,275   | 885,955        | 1,071,527                                    | 83  | 424,471                          | 711,175    | 508,130            | 1         | 1          |
| Okla.   | 148,823            | 268,125   | 479,314        | 549,249                                      | 87  | 171,061                          | 308,190    | 347,844            | 15        | 15         |
| Ark.    | 132,604            | 183,397   | 283,175        | 341,565                                      | 83  | 159,764                          | 220,960    | 272,163            | 19        | 18         |
| Mont.   | 58,333             | 83,140    | 60,058         | 69,975                                       | 86  | 67,829                           | 96,674     | 103,527            | 33        | 32         |
| Wyo.    | 18,319             | 31,749    | 26,523         | 30,271                                       | 88  | 20,817                           | 36,078     | 42,732             | 43        | 43         |
| Colo.   | 63,439             | 115,686   | 137,600        | 181,066                                      | 76  | 83,472                           | 152,218    | 140,586            | 30        | 30         |
| N. Mex. | 21,635             | 29,544    | 31,093         | 40,620                                       | 77  | 28,097                           | 38,269     | 36,561             | 41        | 41         |
| Ariz.   | 16,580             | 33,191    | 35,478         | 42,481                                       | 84  | 19,738                           | 39,513     | 30,763             | 45        | 45         |
| Utah.   | 18,473             | 32,540    | 40,901         | 58,067                                       | 70  | 26,390                           | 46,486     | 50,000             | 42        | 42         |
| Nev.    | 7,731              | 10,813    | 13,439         | 13,980                                       | 96  | 8,053                            | 10,743     | 15,814             | 46        | 47         |
| Idaho.  | 60,179             | 89,068    | 111,938        | 126,492                                      | 88  | 68,385                           | 101,214    | 97,564             | 32        | 31         |
| Wash.   | 127,662            | 145,749   | 185,667        | 227,212                                      | 82  | 155,665                          | 177,743    | 170,487            | 22        | 21         |
| Oreg.   | 63,916             | 87,981    | 99,095         | 131,885                                      | 75  | 85,221                           | 117,308    | 113,932            | 29        | 29         |
| Calif.  | 189,280            | 272,047   | 315,092        | 587,601                                      | 54  | 350,519                          | 503,791    | 474,474            | 8         | 2          |
| U. S.   | 5,343,608          | 8,517,875 | 12,442,950     | 14,754,376                                   | 84.3  | 6,430,742                        | 10,197,092 | 11,887,877         | .....     | .....      |

<sup>1</sup> Does not include nursery or greenhouse products or forest products of the farm.

## WHEN CROPS ARE HARVESTED.

The tabulation below shows when crops are harvested in the United States by showing what proportion of the crop is usually harvested each month. Two factors tend to modify these percentages in any given year. In some years harvests come somewhat earlier or later than normal. Also, if the crop is larger than usual in its northern section and smaller than usual in its southern section, or vice versa, the effect is to modify the percentage of the total crop which is harvested in a particular month. However, it is not likely that such changes from normal are often so marked throughout the United States as to alter greatly the averages here given.

TABLE 398.—Percentage of crops of United States harvested monthly.

| Crop.                | Jan-<br>uary-<br>April. | May.          | June.         | July.         | Aug-<br>ust.  | Sep-<br>tem-<br>ber. | Octo-<br>ber. | No-<br>vem-<br>ber. | De-<br>cem-<br>ber. |
|----------------------|-------------------------|---------------|---------------|---------------|---------------|----------------------|---------------|---------------------|---------------------|
|                      | <i>P. ct.</i>           | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i>        | <i>P. ct.</i> | <i>P. ct.</i>       | <i>P. ct.</i>       |
| Barley.....          |                         | 1.2           | 8.2           | 51.6          | 33.9          | 4.9                  | 0.2           |                     |                     |
| Buckwheat.....       |                         |               |               | .8            | 6.7           | 64.9                 | 26.7          | 0.9                 |                     |
| Corn.....            |                         |               | .1            | .1            | 1.5           | 15.8                 | 23.3          | 43.3                | 10.9                |
| Oats.....            |                         | 1.0           | 7.9           | 52.9          | 34.2          | 3.8                  | .2            |                     |                     |
| Rice.....            |                         |               |               | .9            | 15.3          | 33.0                 | 33.8          | 14.6                | 2.4                 |
| Rye.....             |                         | .2            | 11.3          | 71.5          | 16.3          | .7                   |               |                     |                     |
| Wheat.....           |                         | .5            | 22.0          | 42.3          | 28.4          | 6.5                  | .3            |                     |                     |
| Apples.....          |                         | .1            | 2.5           | 7.2           | 12.5          | 27.7                 | 45.5          | 4.5                 |                     |
| Blackberries.....    | 0.1                     | 1.8           | 15.4          | 47.6          | 27.1          | 6.2                  | 1.7           | .1                  |                     |
| Cantaloupes.....     | .3                      | 1.8           | 8.7           | 20.9          | 36.7          | 28.6                 | 3.0           |                     |                     |
| Cranberries.....     |                         |               |               |               | 7.3           | 67.1                 | 25.6          |                     |                     |
| Grapes.....          |                         |               | .1            | 3.5           | 15.2          | 48.0                 | 29.8          | 3.4                 |                     |
| Peaches.....         |                         | 1.6           | 7.9           | 23.4          | 34.3          | 26.9                 | 5.9           |                     |                     |
| Pears.....           |                         | .1            | .4            | 7.5           | 25.1          | 44.4                 | 21.5          | 1.0                 |                     |
| Raspberries.....     |                         | .5            | 16.5          | 58.4          | 21.7          | 2.8                  | .1            |                     |                     |
| Strawberries.....    | 4.8                     | 23.6          | 49.4          | 18.3          | 3.1           | .6                   | .1            | .1                  |                     |
| Watermelons.....     |                         | .4            | 5.2           | 27.3          | 39.8          | 24.1                 | 3.2           |                     |                     |
| Beans (dry).....     |                         |               |               | .8            | 13.8          | 54.9                 | 26.9          | 3.6                 |                     |
| Beans (lima).....    | .1                      | .7            | 3.4           | 8.4           | 22.1          | 43.4                 | 20.4          | 1.5                 |                     |
| Cabbage.....         | 4.2                     | 2.3           | 4.7           | 6.8           | 9.1           | 18.1                 | 40.4          | 14.0                | .4                  |
| Onions.....          | 1.7                     | 4.4           | 8.7           | 12.6          | 17.2          | 32.5                 | 21.9          | 1.0                 |                     |
| Potatoes.....        | .2                      | 1.3           | 3.3           | 6.8           | 12.1          | 33.7                 | 39.2          | 3.3                 | .1                  |
| Sweet potatoes.....  | .1                      |               | .1            | 1.7           | 6.2           | 21.5                 | 49.1          | 20.6                | .7                  |
| Tomatoes.....        | 3.1                     | 1.3           | 3.8           | 11.4          | 29.2          | 39.7                 | 9.7           | 1.5                 | .3                  |
| Hay, all.....        | .2                      | 2.2           | 15.3          | 47.8          | 21.8          | 10.7                 | 1.9           | .1                  |                     |
| Alfalfa.....         | .9                      | 5.3           | 24.1          | 28.0          | 21.5          | 16.4                 | 3.7           | .1                  |                     |
| Alfalfa seed.....    |                         |               | .6            | 10.7          | 30.5          | 45.1                 | 13.0          | .1                  |                     |
| Bluegrass seed.....  |                         | 5.1           | 43.0          | 23.6          | 16.4          | 11.4                 | .5            |                     |                     |
| Clover seed.....     |                         |               | .2            | 3.4           | 21.2          | 54.4                 | 20.0          | .8                  |                     |
| Millet.....          |                         | .2            | 1.7           | 16.4          | 40.5          | 37.2                 | 4.0           |                     |                     |
| Timothy hay.....     |                         |               | 7.1           | 73.6          | 17.8          | 1.5                  |               |                     |                     |
| Timothy seed.....    |                         |               | .8            | 35.1          | 54.0          | 9.1                  |               |                     |                     |
| Wild hay.....        | .2                      | .6            | 4.1           | 23.9          | 36.5          | 26.4                 | 3.3           |                     |                     |
| Broom corn.....      |                         |               | 2.8           | 9.7           | 29.0          | 43.1                 | 14.4          | 1.0                 |                     |
| Cotton.....          | .4                      |               |               | 1.4           | 11.5          | 31.6                 | 34.4          | 16.0                | 4.7                 |
| Flaxseed.....        |                         |               | .1            | 3.0           | 31.5          | 56.5                 | 8.9           |                     |                     |
| Hops.....            |                         |               |               | 1.1           | 27.6          | 63.6                 | 7.7           |                     |                     |
| Peanuts.....         |                         |               | .1            | 2.1           | 12.5          | 39.3                 | 37.7          | 8.0                 | .3                  |
| Sorghum (syrup)..... |                         |               | .1            | 1.4           | 13.3          | 51.9                 | 30.9          | 2.4                 |                     |
| Sugar beets.....     |                         |               |               | 1.0           | 3.8           | 18.5                 | 56.3          | 20.2                | .2                  |
| Tobacco.....         |                         |               | .6            | 7.5           | 27.1          | 52.7                 | 12.1          |                     |                     |

## PLANTING DATES.

TABLE 399.—Mean dates when planting of specified crops begins, becomes general, and ends.

| State.  | Corn.           |          |         | Oats.           |          |         | Spring wheat.   |          |         |
|---------|-----------------|----------|---------|-----------------|----------|---------|-----------------|----------|---------|
|         | Begin-<br>ning. | General. | Ending. | Begin-<br>ning. | General. | Ending. | Begin-<br>ning. | General. | Ending. |
| Me.     | May 17          | May 26   | June 6  | May 2           | May 13   | June 1  | .....           | .....    | .....   |
| N. H.   | May 14          | May 24   | June 4  | May 4           | May 12   | May 27  | .....           | .....    | .....   |
| Vt.     | May 17          | May 25   | do.     | Apr. 29         | May 9    | May 22  | Apr. 28         | May 8    | May 18  |
| Mass.   | May 10          | May 20   | May 31  | Apr. 10         | Apr. 27  | May 6   | .....           | .....    | .....   |
| R. I.   | do.             | May 19   | June 11 | Apr. 13         | Apr. 25  | May 8   | .....           | .....    | .....   |
| Conn.   | do.             | May 22   | June 4  | Apr. 9          | Apr. 22  | do.     | .....           | .....    | .....   |
| N. Y.   | May 12          | May 21   | June 3  | Apr. 19         | Apr. 30  | May 18  | Apr. 14         | Apr. 28  | May 12  |
| N. J.   | May 6           | May 14   | May 31  | Apr. 1          | Apr. 12  | Apr. 24 | .....           | .....    | .....   |
| Pa.     | May 4           | May 15   | May 29  | Apr. 6          | Apr. 19  | May 2   | Apr. 3          | Apr. 17  | May 2   |
| Del.    | Apr. 28         | May 6    | May 20  | .....           | .....    | .....   | .....           | .....    | .....   |
| Md.     | Apr. 26         | May 8    | May 31  | Mar. 20         | Apr. 1   | Apr. 21 | .....           | .....    | .....   |
| Va.     | Apr. 20         | May 2    | May 21  | Mar. 15         | Mar. 28  | Apr. 13 | .....           | .....    | .....   |
| W. Va.  | Apr. 26         | May 10   | May 27  | Mar. 26         | Apr. 8   | Apr. 22 | .....           | .....    | .....   |
| N. C.   | Mar. 30         | Apr. 19  | May 24  | Feb. 21         | Mar. 7   | Mar. 23 | Jan. 29         | Feb. 21  | Mar. 12 |
| S. C.   | Mar. 18         | Apr. 5   | May 15  | .....           | .....    | .....   | .....           | .....    | .....   |
| Ga.     | Mar. 16         | Apr. 4   | May 7   | Feb. 6          | Feb. 27  | Mar. 16 | .....           | .....    | .....   |
| Fla.    | Feb. 21         | Mar. 11  | Apr. 2  | .....           | .....    | .....   | .....           | .....    | .....   |
| Ohio.   | May 1           | May 14   | May 27  | Mar. 27         | Apr. 9   | Apr. 23 | .....           | .....    | .....   |
| Ind.    | do.             | do.      | May 31  | Mar. 20         | Apr. 4   | Apr. 18 | .....           | .....    | .....   |
| Ill.    | Apr. 30         | May 13   | June 2  | Mar. 19         | Mar. 31  | Apr. 14 | Mar. 22         | Apr. 1   | Apr. 9  |
| Mich.   | May 15          | May 22   | do.     | Apr. 20         | Apr. 30  | May 10  | Apr. 23         | May 3    | May 14  |
| Wis.    | May 11          | May 18   | May 28  | Apr. 16         | Apr. 24  | May 7   | Apr. 10         | Apr. 20  | Apr. 27 |
| Minn.   | May 13          | May 19   | May 30  | Apr. 19         | Apr. 29  | May 9   | Apr. 13         | Apr. 23  | May 5   |
| Iowa.   | May 4           | May 13   | May 26  | Apr. 3          | Apr. 11  | Apr. 23 | Mar. 29         | Apr. 6   | Apr. 14 |
| Mo.     | Apr. 14         | May 1    | May 22  | Mar. 10         | Mar. 25  | Apr. 10 | .....           | .....    | .....   |
| N. Dak. | May 14          | May 21   | May 31  | Apr. 24         | May 5    | May 19  | Apr. 8          | Apr. 21  | May 9   |
| S. Dak. | May 9           | May 19   | June 1  | Apr. 8          | Apr. 18  | Apr. 30 | Apr. 1          | Apr. 14  | Apr. 28 |
| Neb.    | May 3           | May 13   | May 29  | Apr. 2          | Apr. 12  | Apr. 23 | Mar. 22         | Apr. 2   | Apr. 13 |
| Kans.   | Apr. 14         | Apr. 29  | May 18  | Mar. 7          | Mar. 21  | Apr. 3  | Feb. 27         | Mar. 13  | Mar. 27 |
| Ky.     | Apr. 15         | May 5    | May 26  | Mar. 8          | Mar. 23  | Apr. 11 | .....           | .....    | .....   |
| Tenn.   | Mar. 31         | Apr. 21  | May 25  | Feb. 22         | Mar. 11  | Apr. 1  | .....           | .....    | .....   |
| Ala.    | Mar. 12         | Apr. 5   | May 18  | Jan. 31         | Feb. 20  | Mar. 9  | .....           | .....    | .....   |
| Miss.   | do.             | Apr. 1   | May 10  | Feb. 1          | Feb. 19  | do.     | .....           | .....    | .....   |
| La.     | Feb. 27         | Mar. 23  | Apr. 24 | .....           | .....    | .....   | .....           | .....    | .....   |
| Tex.    | do.             | Mar. 13  | Apr. 4  | Jan. 27         | Feb. 10  | Feb. 25 | Jan. 25         | Feb. 13  | Feb. 23 |
| Okl.    | Mar. 24         | Apr. 7   | Apr. 30 | Feb. 17         | Mar. 4   | Mar. 21 | .....           | .....    | .....   |
| Ark.    | Mar. 18         | Apr. 6   | May 6   | Feb. 15         | Mar. 1   | Mar. 18 | .....           | .....    | .....   |

| State. | Barley.         |          |         | Tobacco.        |          |         | Cotton.         |          |         |
|--------|-----------------|----------|---------|-----------------|----------|---------|-----------------|----------|---------|
|        | Begin-<br>ning. | General. | Ending. | Begin-<br>ning. | General. | Ending. | Begin-<br>ning. | General. | Ending. |
| Me.    | May 12          | May 26   | June 11 | .....           | .....    | .....   | .....           | .....    | .....   |
| N. H.  | May 16          | May 21   | June 4  | .....           | .....    | .....   | .....           | .....    | .....   |
| Vt.    | May 12          | May 22   | June 8  | .....           | .....    | .....   | .....           | .....    | .....   |
| Mass.  | May 11          | do.      | June 4  | May 28          | June 12  | June 26 | .....           | .....    | .....   |
| Conn.  | .....           | .....    | .....   | May 26          | June 10  | June 24 | .....           | .....    | .....   |
| N. Y.  | Apr. 23         | Apr. 30  | May 16  | June 1          | June 15  | June 30 | .....           | .....    | .....   |
| Pa.    | Apr. 8          | Apr. 20  | May 2   | May 30          | June 12  | June 27 | .....           | .....    | .....   |
| Md.    | .....           | .....    | .....   | May 23          | June 8   | June 23 | .....           | .....    | .....   |
| Va.    | .....           | .....    | .....   | May 16          | June 5   | June 20 | .....           | .....    | .....   |
| W. Va. | .....           | .....    | .....   | May 23          | do.      | June 22 | .....           | .....    | .....   |
| N. C.  | .....           | .....    | .....   | Apr. 29         | May 14   | May 31  | Apr. 19         | May 1    | May 16  |
| S. C.  | .....           | .....    | .....   | Apr. 10         | Apr. 23  | May 3   | Apr. 5          | Apr. 22  | May 12  |
| Ga.    | .....           | .....    | .....   | Apr. 19         | May 4    | May 23  | do.             | Apr. 21  | do.     |
| Fla.   | .....           | .....    | .....   | Mar. 25         | Apr. 20  | May 15  | Mar. 16         | Mar. 28  | Apr. 20 |
| Ohio.  | Mar. 28         | Apr. 8   | Apr. 21 | May 28          | June 11  | June 25 | .....           | .....    | .....   |
| Ind.   | Mar. 27         | Apr. 7   | Apr. 19 | May 25          | June 9   | June 26 | .....           | .....    | .....   |
| Ill.   | .....           | .....    | .....   | May 23          | May 28   | June 14 | .....           | .....    | .....   |
| Mich.  | Apr. 25         | May 4    | May 15  | .....           | .....    | .....   | .....           | .....    | .....   |
| Wis.   | Apr. 23         | Apr. 30  | May 9   | June 1          | June 16  | June 30 | .....           | .....    | .....   |

## PLANTING DATES—Continued.

TABLE 399.—Mean dates when planting of specified crops begins, becomes general, and ends—Continued.

| State.      | Barley.         |          |         | Tobacco.        |          |         | Cotton.         |          |         |
|-------------|-----------------|----------|---------|-----------------|----------|---------|-----------------|----------|---------|
|             | Begin-<br>ning. | General. | Ending. | Begin-<br>ning. | General. | Ending. | Begin-<br>ning. | General. | Ending. |
| Minn.....   | May 1           | May 10   | May 20  | .....           | .....    | .....   | .....           | .....    | .....   |
| Iowa.....   | Apr. 8          | Apr. 14  | Apr. 22 | .....           | .....    | .....   | .....           | .....    | .....   |
| Mo.....     | Mar. 15         | Apr. 3   | Apr. 15 | May 27          | June 7   | June 20 | Apr. 25         | May 4    | May 14  |
| N. Dak..... | May 4           | May 14   | May 20  | .....           | .....    | .....   | .....           | .....    | .....   |
| S. Dak..... | Apr. 14         | Apr. 26  | May 10  | .....           | .....    | .....   | .....           | .....    | .....   |
| Nebr.....   | Apr. 8          | Apr. 17  | Apr. 28 | .....           | .....    | .....   | .....           | .....    | .....   |
| Kans.....   | Mar. 18         | Mar. 30  | Apr. 13 | .....           | .....    | .....   | .....           | .....    | .....   |
| Ky.....     | .....           | .....    | .....   | May 18          | June 1   | June 17 | .....           | .....    | .....   |
| Tenn.....   | .....           | .....    | .....   | May 10          | May 23   | June 5  | Apr. 21         | May 2    | May 16  |
| Ala.....    | .....           | .....    | .....   | .....           | .....    | .....   | Apr. 8          | Apr. 20  | May 11  |
| Miss.....   | .....           | .....    | .....   | .....           | .....    | .....   | Apr. 5          | Apr. 21  | .....   |
| La.....     | .....           | .....    | .....   | .....           | .....    | .....   | Mar. 29         | .....    | May 7   |
| Tex.....    | .....           | .....    | .....   | .....           | .....    | .....   | .....           | Apr. 13  | May 9   |
| Okla.....   | Feb. 26         | Mar. 17  | Mar. 31 | .....           | .....    | .....   | Apr. 15         | May 2    | May 24  |
| Ark.....    | .....           | .....    | .....   | May 12          | May 24   | June 4  | Apr. 15         | Apr. 23  | May 13  |

## SEED USED PER ACRE.

In consideration of supplies and distribution of crops, as well as for other purposes, the average quantity per acre used for seed is frequently a question of interest. A year ago county crop correspondents of the Bureau of Statistics were requested to report the quantity of various seeds usually sown or planted per acre; the returns were tabulated and show the following averages for the United States; more or less variation from the average prevails in different States, and, therefore, in addition to the averages of returns, an estimate of the range of the bulk of the seedings (not the extreme range) is also given:

TABLE 400.—Seed used per acre, approximate averages for the United States.

| Crop.                            | Average<br>of reports. | Estimated range of<br>bulk of plantings. |
|----------------------------------|------------------------|--|
| Alfalfa, broadcast.....          | pounds.. 18.3          | 15 to 20                                 |
| Alfalfa, drilled.....            | do. 14.8               | 12 to 18                                 |
| Barley.....                      | bushels.. 1.84         | 1.5 to 2.0                               |
| Beans, field, small.....         | do. .76                | .5 to 1.0                                |
| Beans, field, large.....         | do. 1.29               | 1.0 to 1.5                               |
| Beets, common (not sugar).....   | pounds.. 6.3           | 5.5 to 7.5                               |
| Bine grass.....                  | bushels.. 1.07         | .75 to 1.25                              |
| Broom corn.....                  | pounds.. 6.0           | 8 to 7                                   |
| Buckwheat.....                   | bushels.. .98          | .75 to 1.25                              |
| Cabbage plants.....              | number.. 5,658.0       | 5,000 to 7,000                           |
| Clover, alsike.....              | pounds.. 8.7           | 8 to 12                                  |
| Clover, Japan.....               | do. 9.9                | 9 to 15                                  |
| Clover, mammoth.....             | do. 10.4               | 8 to 12                                  |
| Clover, red, alone.....          | do. 10.7               | 8 to 12                                  |
| Clover, red, on grain.....       | do. 9.8                | 8 to 12                                  |
| Clover, crimson.....             | do. 12.1               | 10 to 15                                 |
| Corn, for grain.....             | do. 9.5                | 6 to 12                                  |
| Corn, fodder, for silage.....    | do. 26.0               | 15 to 35                                 |
| Cotton.....                      | bushels.. .96          | .9 to 1.1                                |
| Cowpeas, for forage.....         | do. 1.31               | 1.0 to 1.5                               |
| Cowpeas, in drill with corn..... | do. .63                | .40 to .85                               |
| Cowpeas, for seed.....           | do. .70                | .50 to .75                               |
| Field peas, small.....           | do. .93                | .75 to 1.25                              |
| Field peas, large.....           | do. 1.17               | 1.0 to 1.5                               |
| Flaxseed.....                    | pounds.. 29.2          | 25 to 30                                 |
| Oats.....                        | bushels.. 2.37         | 2.0 to 2.5                               |
| Orchard grass.....               | pounds.. 12.6          | 10 to 15                                 |
| Peanuts.....                     | bushels.. 1.02         | 1.0 to 1.1                               |
| Potatoes.....                    | do. 8.6                | 7 to 12                                  |
| Rice.....                        | do. 1.98               | 1.5 to 2.5                               |
| Rye, for grain.....              | do. 1.44               | 1.25 to 1.75                             |
| Rye, for forage.....             | do. 1.82               | 1.5 to 2.0                               |
| Soy beans, drilled.....          | do. .79                | .60 to 1.00                              |
| Soy beans, broadcast.....        | do. 1.37               | 1.00 to 1.50                             |
| Sugar beets.....                 | pounds.. 13.1          | 12 to 18                                 |
| Sweet potato plants.....         | number.. 6,605.0       | 6,000 to 7,000                           |
| Timothy.....                     | pounds.. 9.4           | 8 to 12                                  |
| Tobacco plants.....              | number.. 4,762.0       | .....                                    |
| Wheat.....                       | bushels.. 1.38         | 1.25 to 1.75                             |

## COMPOSITE CROP YIELDS.

TABLE 401.—Composite numbers of all crop yields.

The figures below are obtained in the following manner: For each State the average yield per acre of each crop (as corn, wheat, cotton, etc.) is reduced to its 10-year average yield per acre; these percentages are combined into a composite or general average, viz., the figures shown. The relative importance of each crop is taken into consideration in making the composite averages.

| State and division.                  | 1921 | 1920  | 1919  | 1918  | 1917  | State and division.                  | 1921 | 1920  | 1919  | 1918  | 1917  |
|--------------------------------------|------|-------|-------|-------|-------|--------------------------------------|------|-------|-------|-------|-------|
| Maine.....                           | 95   | 90    | 106   | 100   | 100   | North Dakota.....                    | 82   | 91    | 69    | 108   | 65    |
| New Hampshire...                     | 94   | 104   | 105   | 106   | 110   | South Dakota.....                    | 87   | 104   | 89    | 139   | 115   |
| Vermont.....                         | 87   | 104   | 104   | 97    | 110   | Nebraska.....                        | 104  | 137   | 114   | 73    | 103   |
| Massachusetts.....                   | 93   | 107   | 103   | 98    | 105   | Kansas.....                          | 102  | 129   | 111   | 82    | 92    |
| Rhode Island.....                    | 95   | 98    | 101   | 103   | 114   | N. C. west of Mississippi River..... | 95.6 | 113.0 | 100.2 | 101.1 | 104.6 |
| Connecticut.....                     | 102  | 104   | 100   | 98    | 107   | Kentucky.....                        | 93   | 106   | 95    | 100   | 109   |
| New York.....                        | 84   | 110   | 107   | 102   | 108   | Tennessee.....                       | 97   | 105   | 96    | 96    | 105   |
| New Jersey.....                      | 92   | 121   | 97    | 100   | 102   | Alabama.....                         | 82   | 87    | 82    | 101   | 90    |
| Pennsylvania.....                    | 94   | 109   | 105   | 102   | 101   | Mississippi.....                     | 86   | 90    | 92    | 102   | 103   |
| North Atlantic...                    | 90.3 | 107.9 | 104.8 | 101.2 | 104.6 | Louisiana.....                       | 95   | 97    | 87    | 85    | 95    |
| Delaware.....                        | 83   | 111   | 91    | 91    | 104   | Texas.....                           | 92   | 114   | 124   | 65    | 74    |
| Maryland.....                        | 90   | 112   | 98    | 100   | 106   | Oklahoma.....                        | 105  | 140   | 139   | 66    | 87    |
| Virginia.....                        | 86   | 109   | 102   | 105   | 108   | Arkansas.....                        | 92   | 107   | 98    | 76    | 110   |
| West Virginia.....                   | 91   | 109   | 102   | 99    | 103   | South Central...                     | 92.9 | 107.4 | 105.5 | 83.6  | 93.0  |
| North Carolina.....                  | 85   | 107   | 92    | 106   | 97    | Montana.....                         | 84   | 83    | 40    | 69    | 55    |
| South Carolina.....                  | 74   | 99    | 94    | 98    | 102   | Wyoming.....                         | 86   | 113   | 65    | 105   | 88    |
| Georgia.....                         | 73   | 88    | 85    | 97    | 97    | Colorado.....                        | 99   | 105   | 90    | 96    | 103   |
| Florida.....                         | 90   | 96    | 92    | 99    | 94    | New Mexico.....                      | 96   | 107   | 104   | 96    | 85    |
| South Atlantic...                    | 80.8 | 100.4 | 93.1  | 100.3 | 100.7 | Arizona.....                         | 110  | 97    | 112   | 94    | 100   |
| Ohio.....                            | 89   | 107   | 105   | 102   | 111   | Utah.....                            | 108  | 103   | 78    | 94    | 109   |
| Indiana.....                         | 83   | 106   | 96    | 110   | 109   | Nevada.....                          | 100  | 90    | 88    | 92    | 106   |
| Illinois.....                        | 94   | 101   | 97    | 111   | 120   | Idaho.....                           | 98   | 98    | 82    | 89    | 91    |
| Michigan.....                        | 85   | 109   | 100   | 90    | 98    | Washington.....                      | 108  | 92    | 94    | 75    | 83    |
| Wisconsin.....                       | 89   | 112   | 107   | 114   | 103   | Oregon.....                          | 104  | 103   | 88    | 80    | 82    |
| N. C. east of Mississippi River..... | 89.8 | 106.2 | 100.6 | 106.0 | 110.0 | California.....                      | 95   | 96    | 99    | 83    | 103   |
| Minnesota.....                       | 84   | 97    | 89    | 123   | 111   | Far Western.....                     | 98.3 | 96.9  | 88.5  | 85.3  | 91.2  |
| Iowa.....                            | 99   | 113   | 107   | 104   | 111   | United States...                     | 91.7 | 106.9 | 99.8  | 97.6  | 102.0 |
| Missouri.....                        | 102  | 114   | 106   | 84    | 124   |                                      |      |       |       |       |       |

## COMPOSITE CROP CONDITIONS, MONTHLY.

The character of seasons in past years for crops in the United States is indicated in the accompanying table of the composite condition of all important crops, monthly, during the growing period, 100 representing an average condition:

TABLE 402.—Composite condition of growing crops, monthly, 1910-1921.

| Year.     | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Year.     | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. |
|-----------|---------|---------|---------|----------|---------|---------|-----------|---------|---------|---------|----------|---------|---------|
| 1910..... |         |         | 93.5    | 97.2     | 99.5    | 99.3    | 1916..... | 97.7    | 101.6   | 97.4    | 94.6     | 94.5    | 95.1    |
| 1911..... | 97.2    | 86.3    | 85.4    | 84.8     | 86.7    | 90.6    | 1917..... | 94.2    | 97.8    | 98.8    | 102.5    | 102.4   | 102.0   |
| 1912..... | 99.1    | 98.8    | 100.3   | 104.1    | 110.0   | 107.7   | 1918..... | 102.9   | 101.6   | 98.9    | 94.1     | 96.6    | 97.6    |
| 1913..... | 98.9    | 98.2    | 95.5    | 89.9     | 90.3    | 93.3    | 1919..... | 104.7   | 102.4   | 97.8    | 98.8     | 98.7    | 99.8    |
| 1914..... | 102.2   | 101.5   | 98.0    | 97.9     | 99.4    | 102.3   | 1920..... | 94.8    | 99.7    | 105.3   | 107.0    | 106.9   | 105.9   |
| 1915..... | 102.3   | 102.3   | 103.9   | 105.5    | 106.9   | 108.0   | 1921..... | 93.2    | 96.4    | 93.0    | 92.9     | 91.1    | 91.7    |

## WEIGHTS PER BUSHEL.

A bushel is regarded as a definite weight rather than a cubic measure in the estimates of production and prices made by the Bureau of Markets and Crop Estimates. The weights which are regarded as a bushel for various products are as follows: Wheat, 60 pounds; corn, 56 pounds if shelled, 70 pounds if in ear; oats, 32 pounds; barley, 48 pounds; rye, 56 pounds; buckwheat, 48 pounds; white (Irish) potatoes, 60 pounds; sweet potatoes, 55 pounds; apples, 48 pounds; pears, 48 pounds; peaches, 48 pounds; walnuts and hickory nuts, 50 pounds; beans (dry), 60 pounds; onions, 57 pounds; turnips, 55 pounds; clover seed, 60 pounds; alfalfa seed, 60 pounds; timothy seed, 45 pounds; kafir corn, 56 pounds. Estimates of yields and prices in tons are always on the basis of 2,000 pounds.

TABLE 403.—Estimated average weight in pounds per measured bushel of wheat, oats, and barley, of the yearly crops of the United States.

| Year.     | Wheat.  | Oats.   | Barley. | Year.     | Wheat.  | Oats.   | Barley. |
|-----------|---------|---------|---------|-----------|---------|---------|---------|
|           | Pounds. | Pounds. | Pounds. |           | Pounds. | Pounds. | Pounds. |
| 1902..... | 57.3    | 31.0    | .....   | 1912..... | 58.3    | 33.0    | 46.8    |
| 1903..... | 57.4    | 29.7    | .....   | 1913..... | 58.7    | 32.1    | 46.5    |
| 1904..... | 55.5    | 31.5    | .....   | 1914..... | 58.0    | 31.5    | 46.2    |
| 1905..... | 57.5    | 32.7    | .....   | 1915..... | 57.9    | 33.0    | 47.4    |
| 1906..... | 58.3    | 32.0    | .....   | 1916..... | 57.1    | 31.2    | 45.2    |
| 1907..... | 58.2    | 29.4    | .....   | 1917..... | 58.5    | 33.4    | 46.6    |
| 1908..... | 58.3    | 29.8    | .....   | 1918..... | 58.8    | 33.2    | 46.9    |
| 1909..... | 57.9    | 32.7    | .....   | 1919..... | 50.3    | 31.1    | 45.2    |
| 1910..... | 58.5    | 32.7    | 46.9    | 1920..... | 57.4    | 33.1    | 48.0    |
| 1911..... | 57.8    | 31.1    | 46.0    | 1921..... | 56.6    | 28.3    | 44.4    |

## INTEREST ON SHORT-TIME LOANS.

The interest rates charged by banks to farmers of the United States for short-time loans averaged in April, 1921, about 7.95 per cent as compared with 7.61 per cent in 1920 and 7.75 per cent in 1913.

These figures are based upon reports received from country banks in answer to the following question:

"What is the average of the current rates of interest paid to banks by farmers for three to six months' loans? (Rate which will represent as nearly as possible the average of all such loans, secured and unsecured.) What was the average for similar loans a year ago?"

The results by States and grand divisions are shown in the accompanying table.

The main purpose of the inquiry was to ascertain the differences of the averages of the various States and sections; and to ascertain what changes have occurred since the previous investigation made in 1913 (results with detailed comments, published in the Crop Reporter for April, 1913).

The Georgia average rate, 10.36, which is the highest of all the State averages, is about 73 per cent higher than the lowest State average, 6.00, reported from several North Atlantic States. However, in 1913 the highest State average was almost 100 per cent higher than the lowest average. The figures generally indicate that the spread in the different sections of the country is not quite so wide now as formerly.

TABLE 404.—Interest rates, by banks, for short-time loans to farmers, in April of years indicated.

| State and division. | 1921  | 1920 | 1913 | 1912 | State and division. | 1921  | 1920  | 1913  | 1912  |
|---------------------|-------|------|------|------|---------------------|-------|-------|-------|-------|
| Maine.....          | 6.38  | 8.05 | 6.14 | 6.06 | North Dakota.....   | 9.79  | 9.41  | 10.70 | 10.89 |
| New Hampshire.....  | 6.00  | 6.00 | 5.80 | 5.80 | South Dakota.....   | 9.48  | 8.66  | 9.48  | 9.69  |
| Vermont.....        | 6.00  | 6.00 | 6.00 | 6.00 | Nebraska.....       | 8.80  | 8.04  | 8.00  | 7.99  |
| Massachusetts.....  | 6.75  | 6.25 | 5.96 | 5.95 | Kansas.....         | 8.37  | 8.04  | 8.37  | 8.44  |
| Rhode Island.....   | 6.33  | 6.00 | 5.95 | 5.91 | N.C.W.Miss.R.....   | 8.33  | 7.89  | 8.05  | 8.11  |
| Connecticut.....    | 6.21  | 6.21 | 5.92 | 5.92 | Kentucky.....       | 6.50  | 6.25  | 6.86  | 6.84  |
| New York.....       | 6.02  | 6.02 | 5.99 | 5.99 | Tennessee.....      | 8.07  | 7.79  | 8.28  | 8.26  |
| New Jersey.....     | 6.00  | 6.00 | 5.92 | 5.92 | Alabama.....        | 9.00  | 8.59  | 10.02 | 10.00 |
| Pennsylvania.....   | 6.00  | 5.97 | 5.93 | 5.93 | Mississippi.....    | 8.15  | 8.00  | 8.26  | 9.54  |
| N. Atlantic.....    | 6.08  | 6.02 | 5.96 | 5.96 | Louisiana.....      | 8.69  | 8.23  | 8.33  | 8.25  |
| Delaware.....       | 6.00  | 6.00 | 5.94 | 5.94 | Texas.....          | 9.83  | 9.73  | 9.97  | 10.03 |
| Maryland.....       | 6.00  | 5.99 | 5.93 | 5.92 | Oklahoma.....       | 9.78  | 9.63  | 11.58 | 12.10 |
| Virginia.....       | 6.28  | 6.14 | 6.21 | 6.21 | Arkansas.....       | 9.74  | 9.65  | 9.67  | 9.66  |
| West Virginia.....  | 6.00  | 6.00 | 6.24 | 6.28 | S. Central.....     | 9.06  | 8.88  | 9.51  | 9.08  |
| North Carolina..... | 6.48  | 6.17 | 6.39 | 6.38 | Montana.....        | 9.92  | 9.76  | 10.32 | 10.32 |
| South Carolina..... | 8.10  | 8.09 | 8.06 | 8.06 | Wyoming.....        | 9.54  | 9.16  | 9.37  | 9.37  |
| Georgia.....        | 10.36 | 9.94 | 9.93 | 9.67 | Colorado.....       | 9.59  | 8.93  | 9.24  | 9.32  |
| Florida.....        | 8.44  | 8.44 | 8.80 | 8.77 | New Mexico.....     | 10.00 | 9.86  | 10.57 | 10.66 |
| S. Atlantic.....    | 7.43  | 7.26 | 7.36 | 7.30 | Arizona.....        | ..... | ..... | 10.15 | 10.50 |
| Ohio.....           | 6.90  | 6.44 | 6.23 | 6.24 | Utah.....           | 9.00  | 8.50  | 8.61  | 8.63  |
| Indiana.....        | 7.35  | 6.96 | 6.47 | 6.46 | Nevada.....         | 8.12  | 8.00  | 9.03  | 9.30  |
| Illinois.....       | 6.98  | 6.52 | 6.31 | 6.25 | Idaho.....          | 9.67  | 9.44  | 9.92  | 9.98  |
| Michigan.....       | 6.94  | 6.40 | 6.88 | 6.32 | Washington.....     | 8.67  | 8.49  | 8.99  | 9.06  |
| Wisconsin.....      | 7.00  | 6.50 | 6.24 | 6.23 | Oregon.....         | 8.42  | 8.24  | 8.32  | 8.27  |
| N.C.E.Miss.R.....   | 7.04  | 6.56 | 6.38 | 6.35 | California.....     | 7.63  | 7.47  | 7.44  | 7.43  |
| Minnesota.....      | 8.40  | 7.89 | 7.93 | 8.05 | Far Western.....    | 8.55  | 8.31  | 8.55  | 8.57  |
| Iowa.....           | 7.66  | 7.42 | 7.21 | 7.23 | United States.....  | 7.95  | 7.61  | 7.75  | 7.79  |
| Missouri.....       | 7.57  | 7.20 | 7.28 | 7.28 |                     |       |       |       |       |

## MONTHLY SALES FROM FARMS.

For every \$100 worth of product sold from the farm, about \$12.80 are sold in October, the month of heaviest total sales; \$11.70 in November, \$10.50 in December, and \$10.10 in September—in the four months, \$44.90. Smallest sales are in May and June, when the amount in each month is \$6.10 of the year's \$100.

Sales of crops alone are more concentrated in the fall months; for every \$100 worth of crops sold in a year, \$15.50 worth are sold in October, \$15.70 in November, \$12.60 in December, and \$12.40 in September; in the four months, \$56.20. Smallest sales (\$3.10) are in June.

Sales of live-stock products are fairly evenly distributed through the year. For every \$100 worth of live-stock products sold in a year \$9.80 are sold in June, the highest proportion in any month, and \$7.50 in January, the lowest.

These estimates are based upon reports made by crop correspondents of the Bureau of Crop Estimates of their actual sales in 1914, modified when necessary to make the figures typical of sales in recent years. More than 5,000 reports were tabulated. As the correspondents are representative farmers, the averages of their reports in the United States and in the larger States are probably nearly the same as the averages for all the farmers in the States. Details of monthly sales are given in tabulation below.

TABLE 405.—*Monthly percentages of year's receipts from sales by farmers.*

[Monthly rate of sales from farms, averages for recent years, estimates based upon reports of actual monthly sales made by crop correspondents of Bureau of Crop Estimates.]

## FROM SALES OF ALL KINDS.

| Division.                          | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Year. |
|------------------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-------|
| North Atlantic.....                | 7.0      | 6.3       | 7.6    | 7.9    | 7.8  | 6.9   | 7.4   | 8.6     | 10.1       | 11.1     | 10.8      | 8.5       | 100.0 |
| South Atlantic.....                | 8.4      | 5.8       | 5.8    | 5.8    | 4.7  | 4.8   | 5.9   | 5.6     | 9.0        | 15.6     | 14.1      | 14.5      | 100.0 |
| North Central east of Miss. R..... | 8.4      | 7.0       | 9.2    | 7.7    | 7.6  | 8.3   | 7.7   | 8.3     | 9.0        | 8.1      | 8.9       | 9.8       | 100.0 |
| North Central west of Miss. R..... | 10.0     | 8.5       | 8.1    | 8.0    | 6.0  | 5.7   | 6.2   | 6.8     | 10.7       | 10.7     | 10.1      | 10.2      | 100.0 |
| South Central.....                 | 8.6      | 6.0       | 5.9    | 5.0    | 4.8  | 4.0   | 5.6   | 5.1     | 11.9       | 16.0     | 14.9      | 12.3      | 100.0 |
| Far Western.....                   | 6.4      | 4.2       | 5.5    | 7.2    | 5.0  | 6.8   | 4.9   | 6.1     | 9.3        | 20.0     | 16.0      | 8.4       | 100.0 |
| United States.....                 | 8.5      | 6.8       | 7.4    | 6.9    | 6.1  | 6.1   | 6.4   | 6.9     | 10.1       | 12.6     | 11.7      | 10.5      | 100.0 |

## FROM SALES OF CROPS.

| Division.                          | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Year. |
|------------------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-------|
| North Atlantic.....                | 5.3      | 4.5       | 5.5    | 5.1    | 4.8  | 3.3   | 5.8   | 10.4    | 13.9       | 15.4     | 15.7      | 10.3      | 100.0 |
| South Atlantic.....                | 8.7      | 5.0       | 4.3    | 4.5    | 2.7  | 2.7   | 5.1   | 5.0     | 8.5        | 15.3     | 19.0      | 19.2      | 100.0 |
| North Central east of Miss. R..... | 6.6      | 6.9       | 7.6    | 6.7    | 6.5  | 5.9   | 9.3   | 12.9    | 12.3       | 8.3      | 9.3       | 7.7       | 100.0 |
| North Central west of Miss. R..... | 8.1      | 6.3       | 5.8    | 4.6    | 4.4  | 2.6   | 7.1   | 7.3     | 15.0       | 13.6     | 13.2      | 12.0      | 100.0 |
| South Central.....                 | 7.4      | 4.2       | 4.4    | 3.1    | 2.1  | 2.3   | 5.8   | 4.8     | 12.3       | 19.3     | 19.1      | 15.2      | 100.0 |
| Far Western.....                   | 7.1      | 3.2       | 4.0    | 4.0    | 3.0  | 2.6   | 5.0   | 8.2     | 10.2       | 22.8     | 19.7      | 10.2      | 100.0 |
| United States.....                 | 7.4      | 5.2       | 5.3    | 4.6    | 3.9  | 3.1   | 6.5   | 7.8     | 12.4       | 15.5     | 15.7      | 12.6      | 100.0 |

## FROM SALES OF LIVE STOCK.

| Division.                          | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Year. |
|------------------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-------|
| North Atlantic.....                | 7.5      | 6.4       | 9.6    | 10.8   | 10.6 | 5.2   | 5.8   | 5.6     | 8.8        | 9.6      | 12.7      | 7.4       | 100.0 |
| South Atlantic.....                | 8.0      | 5.6       | 7.7    | 6.1    | 5.9  | 6.3   | 5.9   | 5.4     | 10.4       | 21.4     | 8.4       | 8.9       | 100.0 |
| North Central east of Miss. R..... | 0.8      | 6.8       | 10.9   | 7.9    | 7.0  | 9.5   | 6.1   | 5.0     | 7.5        | 7.9      | 9.4       | 12.2      | 100.0 |
| North Central west of Miss. R..... | 12.6     | 10.3      | 10.1   | 7.9    | 6.0  | 6.9   | 4.0   | 6.5     | 7.7        | 9.3      | 8.3       | 9.5       | 100.0 |
| South Central.....                 | 9.9      | 8.6       | 8.0    | 7.1    | 4.2  | 5.2   | 5.0   | 5.4     | 12.5       | 13.6     | 11.1      | 9.4       | 100.0 |
| Far Western.....                   | 5.9      | 4.5       | 5.0    | 11.3   | 5.3  | 9.2   | 4.5   | 2.4     | 9.4        | 21.9     | 14.6      | 6.0       | 100.0 |
| United States.....                 | 10.3     | 8.1       | 9.2    | 8.2    | 6.2  | 7.4   | 5.3   | 5.5     | 8.7        | 11.8     | 9.8       | 9.5       | 100.0 |

## FROM SALES OF LIVE-STOCK PRODUCTS.

| Division.                          | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Year. |
|------------------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|-------|
| North Atlantic.....                | 7.8      | 7.6       | 8.3    | 8.7    | 9.2  | 9.1   | 8.7   | 8.4     | 8.0        | 8.7      | 7.7       | 7.8       | 100.0 |
| South Atlantic.....                | 7.9      | 8.0       | 7.5    | 8.4    | 8.1  | 9.2   | 7.5   | 7.9     | 8.9        | 8.9      | 8.7       | 9.0       | 100.0 |
| North Central east of Miss. R..... | 8.0      | 7.4       | 8.4    | 9.1    | 10.0 | 9.5   | 8.6   | 7.7     | 7.7        | 7.9      | 7.8       | 7.9       | 100.0 |
| North Central west of Miss. R..... | 6.4      | 8.0       | 7.8    | 9.4    | 9.9  | 10.7  | 8.9   | 7.9     | 8.3        | 7.3      | 8.0       | 7.4       | 100.0 |
| South Central.....                 | 8.7      | 8.6       | 9.1    | 9.3    | 8.4  | 8.1   | 7.4   | 6.6     | 7.0        | 7.7      | 9.1       | 10.0      | 100.0 |
| Far Western.....                   | 6.3      | 5.9       | 7.0    | 8.0    | 8.5  | 10.7  | 8.7   | 8.6     | 7.4        | 10.4     | 10.6      | 7.9       | 100.0 |
| United States.....                 | 7.5      | 7.6       | 8.1    | 8.9    | 9.3  | 9.6   | 8.5   | 8.0     | 7.9        | 8.3      | 8.3       | 8.0       | 100.0 |



## RECEIPTS FROM FARM SALES.

About 10,000 crop correspondents of the Bureau of Markets and Crop Estimates have reported their year's total value of all sales of farm products, divided into four classes, viz, (1) live animals, (2) animal products, (3) crops, (4) miscellaneous. Correspondents were requested to give their 1914 sales if that year was representative; if 1914 sales were not normal, they were to give figures which would be typical of sales in recent years.

Of every \$100 worth of products sold by all who reported approximately \$36 were for live animals, \$20 were for the products of live stock, \$40 were for crops, and \$4 represented miscellaneous items. As the correspondents are representative farmers, the averages of their reports in the United States and in the larger States are probably nearly the same as the averages for all the farmers in the States.

The character of farmers' sales varies widely in different sections of the country. In the cotton States, as would be expected, by far the greater part of the sales are as crops. Thus, in Georgia, for every \$100 worth of products sold, \$75 represents crops, \$14 live animals, \$8 animal products, and \$3 miscellany. Even in Texas, regarded as a cattle as well as a cotton State, cotton so far predominates that \$72 represents crops, \$16 live animals, and \$8 animal products out of every \$100 of sales. It may be that the cattle section of the State is not so fully represented in the returns as the cotton section; but complete returns from all farmers probably would not materially modify these figures.

TABLE 406.—Receipts from the sale of (1) live stock, (2) live-stock products, (3) crops, (4) miscellaneous, out of every \$100 received from all sales; average of recent years.

[From tabulation of reports from crop correspondents of the Bureau of Crop Estimates.]

| State.                     | Live stock. | Live-stock products. | Crops. | Miscellaneous. | State.                             | Live stock. | Live-stock products. | Crops. | Miscellaneous. |
|----------------------------|-------------|----------------------|--------|----------------|------------------------------------|-------------|----------------------|--------|----------------|
| Maine.....                 | \$15        | \$42                 | \$35   | \$8            | Minnesota.....                     | \$33        | \$20                 | \$43   | \$4            |
| New Hampshire.....         | 20          | 51                   | 25     | 4              | Iowa.....                          | 63          | 12                   | 22     | 3              |
| Vermont.....               | 18          | 64                   | 10     | 8              | Missouri.....                      | 62          | 13                   | 21     | 4              |
| Massachusetts.....         | 19          | 50                   | 27     | 5              | North Dakota.....                  | 25          | 6                    | 66     | 3              |
| Rhode Island.....          | 13          | 62                   | 22     | 2              | South Dakota.....                  | 41          | 18                   | 36     | 5              |
| Connecticut.....           | 12          | 62                   | 24     | 1              | Nebraska.....                      | 56          | 9                    | 32     | 3              |
| New York.....              | 14          | 53                   | 27     | 6              | Kansas.....                        | 39          | 10                   | 42     | 3              |
| New Jersey.....            | 6           | 26                   | 62     | 6              | Kentucky.....                      | 45          | 19                   | 31     | 5              |
| Pennsylvania.....          | 21          | 42                   | 32     | 5              | Tennessee.....                     | 42          | 12                   | 40     | 6              |
| Maryland and Delaware..... | 23          | 32                   | 42     | 3              | Alabama.....                       | 17          | 14                   | 66     | 3              |
| Virginia.....              | 40          | 15                   | 35     | 4              | Mississippi.....                   | 12          | 8                    | 76     | 4              |
| West Virginia.....         | 58          | 23                   | 13     | 6              | Louisiana.....                     | 13          | 9                    | 72     | 6              |
| North Carolina.....        | 18          | 15                   | 60     | 7              | Texas.....                         | 10          | 9                    | 72     | 3              |
| South Carolina.....        | 8           | 12                   | 72     | 8              | Oklahoma.....                      | 32          | 11                   | 53     | 4              |
| Georgia.....               | 14          | 8                    | 75     | 3              | Arkansas.....                      | 34          | 11                   | 48     | 7              |
| Florida.....               | 16          | 16                   | 64     | 4              | Mountain States <sup>1</sup> ..... | 40          | 13                   | 34     | 4              |
| Ohio.....                  | 41          | 22                   | 31     | 6              | Washington.....                    | 16          | 40                   | 36     | 2              |
| Indiana.....               | 50          | 16                   | 30     | 4              | Oregon.....                        | 33          | 32                   | 30     | 5              |
| Illinois.....              | 42          | 20                   | 35     | 3              | California.....                    | 15          | 12                   | 72     | 14             |
| Michigan.....              | 34          | 30                   | 31     | 5              | United States.....                 | 36          | 20                   | 40     | 4              |
| Wisconsin.....             | 31          | 47                   | 17     | 5              |                                    |             |                      |        |                |

<sup>1</sup> Including Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, and Idaho.

## PRODUCTIVITY OF VARIOUS COUNTRIES.

Index figures are usually applied to price comparisons, but they can as readily be used to compare the relative productivity of different countries. Six crops—wheat, oats, rye, barley, corn, and potatoes—comprise the bulk of crop production in most countries of the world. Of the total area in cultivated crops (before the war), excluding hay and grass crops, they comprised in Germany approximately 82 per cent; in France, 75 per cent; United Kingdom, 72; Denmark, 79; Holland, 75; Belgium, 75; Austria, 84; Hungary, 87; Italy, 45; Spain, 65; Roumania, 93; European Russia, 87; Asiatic Russia, 91; Bulgaria, 85; Algeria, 85; Japan, 31; Australia, 91; Canada, 91; Argentina, 88; United States, 82 per cent. Although these figures are only approximations, they are sufficiently accurate to indicate that index numbers of the relative yields per acre of these six products combined would fairly represent the relative per acre productivity of the various countries. For each country the average yield per acre for a series of years was obtained (except in a few countries where data for only one or two years were obtainable), and these average yields were reduced to their percentage of the average yield of all countries. The percentages for each country were combined, weighted in proportion to the relative acreage of the various crops in the country, to obtain the index number of production. Following is the result obtained, 100 representing the weighted average of all countries:

TABLE 407.—Index numbers of productivity of countries named.

|                     |     |                    |     |                       |    |
|---------------------|-----|--------------------|-----|-----------------------|----|
| Belgium.....        | 231 | Sweden.....        | 136 | Australia.....        | 76 |
| Switzerland.....    | 202 | Norway.....        | 128 | Serbia.....           | 76 |
| Netherlands.....    | 190 | France.....        | 123 | Argentina.....        | 75 |
| United Kingdom..... | 177 | Austria.....       | 120 | Portugal.....         | 73 |
| Germany.....        | 169 | Hungary.....       | 113 | Russia, European..... | 72 |
| Denmark.....        | 168 | United States..... | 108 | Russia, Asiatic.....  | 71 |
| New Zealand.....    | 167 | Italy.....         | 96  | Uruguay.....          | 70 |
| Egypt.....          | 161 | Rumania.....       | 94  | Algeria.....          | 65 |
| Japan.....          | 137 | Spain.....         | 93  | Mexico.....           | 52 |
| Canada.....         | 136 | Bulgaria.....      | 87  | Tunis.....            | 37 |
| Chile.....          | 136 | India.....         | 84  |                       |    |

## WORLD PRODUCTION AND EXPORT TRADE.

TABLE 408.—*Production and export trade of the world in important crops, average, 1909-1913, in millions, i. e., 000,000 omitted.*

[Substantially the total production and exports for the world. However, China's probably large cotton production, also some minor items of production and exports for other countries, are omitted owing to lack of trustworthy information. One short ton = 2,000 pounds.]

| Crop.                         | Production. |                           | Exports. |                               |                      |                              |
|-------------------------------|-------------|---------------------------|----------|-------------------------------|----------------------|------------------------------|
|                               | World.      | United States production. | World.   | Contributed by United States. | World crop exported. | United States crop exported. |
|                               |             | Per cent.                 |          | Per cent.                     | Per cent.            | Per cent.                    |
| Wheat..... bushels..          | 3,726       | 18                        | 745      | 13                            | 20                   | 15                           |
| Corn..... do.....             | 3,897       | 71                        | 745      | 17                            | 7                    | 1                            |
| Oats..... do.....             | 4,324       | 28                        | 1,224    | 1                             | 1.5                  | 1.1                          |
| Barley..... do.....           | 1,438       | 12                        | 1,300    | 1.3                           | 120                  | 14                           |
| Rye..... do.....              | 1,788       | 6                         | 1,108    | 16.8                          | 1.6                  | 1.2                          |
| Potatoes..... do.....         | 5,471       | 6                         | 175      | 1.2                           | 1.1                  | 10.5                         |
| Tobacco..... pounds..         | 2,712       | 37                        | 929      | 41                            | 34                   | 38                           |
| Rice..... do.....             | 110,780     | 0.6                       | 12,721   | 0.1                           | 11                   | 2                            |
| Cotton..... 500-pound bales.. | 21.1        | 62                        | 14.0     | 64                            | 66                   | 69                           |
| Sugar..... short tons..       | 18.7        | 5                         | 7.5      | 0.5                           | 40                   | 4                            |

<sup>1</sup> Three-year average, 1911-1913.

## INDEX NUMBERS OF CROP AND MEAT-ANIMAL PRICES.

TABLE 409.—*Index numbers of crop and meat-animal prices, monthly and average, 1908-1921.*

The trend of prices to farmers for important crops is indicated in the following figures; the base 100 is the average price December 1 in the 43 years 1868-1908 of wheat, corn, oats, barley, rye, buckwheat, potatoes, hay, flax, and cotton.

## CROPS.

| Year.    | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. | Yearly aver. <sup>1</sup> |
|----------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|---------------------------|
| 1908.... | 120.1   | 122.2   | 124.3   | 125.7   | 127.5  | 136.6   | 135.3   | 135.5   | 130.8    | 127.2   | 119.6   | 117.4   | 125.1                     |
| 1909.... | 117.8   | 120.4   | 126.3   | 130.6   | 138.6  | 146.5   | 140.5   | 142.3   | 132.9    | 130.5   | 129.3   | 127.7   | 130.9                     |
| 1910.... | 134.1   | 138.5   | 139.9   | 138.8   | 133.5  | 133.1   | 137.1   | 137.0   | 129.8    | 122.2   | 118.4   | 119.6   | 130.6                     |
| 1911.... | 118.6   | 119.8   | 117.9   | 118.0   | 122.2  | 127.7   | 136.3   | 145.2   | 141.6    | 138.0   | 135.6   | 153.1   | 131.9                     |
| 1912.... | 133.9   | 140.2   | 144.7   | 153.4   | 166.3  | 168.3   | 160.1   | 148.0   | 137.6    | 128.6   | 118.3   | 110.3   | 134.6                     |
| 1913.... | 110.9   | 112.6   | 113.3   | 113.6   | 116.2  | 121.2   | 122.9   | 125.4   | 136.3    | 139.1   | 133.9   | 132.7   | 126.7                     |
| 1914.... | 132.5   | 132.1   | 133.8   | 134.2   | 135.9  | 138.8   | 137.7   | 137.6   | 141.3    | 136.4   | 127.4   | 122.8   | 132.9                     |
| 1915.... | 126.7   | 140.5   | 144.0   | 144.5   | 150.0  | 147.3   | 139.1   | 138.9   | 132.5    | 124.2   | 124.4   | 120.4   | 132.1                     |
| 1916.... | 120.0   | 139.9   | 138.6   | 140.2   | 143.3  | 145.8   | 144.8   | 147.7   | 161.5    | 168.6   | 178.8   | 187.9   | 158.3                     |
| 1917.... | 183.6   | 195.6   | 206.5   | 225.2   | 280.6  | 291.3   | 289.9   | 307.8   | 279.6    | 277.0   | 261.3   | 252.3   | 254.5                     |
| 1918.... | 264.1   | 271.6   | 288.8   | 288.6   | 281.8  | 271.9   | 272.9   | 280.6   | 293.3    | 289.3   | 266.5   | 265.2   | 277.4                     |
| 1919.... | 272.4   | 259.9   | 257.1   | 271.2   | 293.7  | 307.2   | 310.2   | 329.0   | 317.7    | 299.0   | 279.4   | 282.4   | 293.4                     |
| 1920.... | 296.7   | 311.0   | 314.3   | 334.1   | 362.1  | 380.4   | 374.0   | 329.6   | 294.7    | 248.7   | 201.1   | 165.5   | 271.0                     |
| 1921.... | 158.5   | 151.4   | 147.5   | 139.3   | 128.7  | 134.6   | 130.6   | 133.8   | 134.5    | 137.3   | 121.4   | 120.9   | 134.7                     |

MEAT ANIMALS.<sup>2</sup>

| Year.    | Jan. 1. | Feb. 1. | Mar. 1. | Apr. 1. | May 1. | June 1. | July 1. | Aug. 1. | Sept. 1. | Oct. 1. | Nov. 1. | Dec. 1. | Yearly aver. <sup>1</sup> |
|----------|---------|---------|---------|---------|--------|---------|---------|---------|----------|---------|---------|---------|---------------------------|
| 1910.... | 6.67    | 6.71    | 7.39    | 7.74    | 7.37   | 7.29    | 6.98    | 6.67    | 6.92     | 6.80    | 6.47    | 6.21    | 6.90                      |
| 1911.... | 6.40    | 6.19    | 6.09    | 5.80    | 5.54   | 5.45    | 5.52    | 5.87    | 5.87     | 5.58    | 5.44    | 5.37    | 5.77                      |
| 1912.... | 5.44    | 5.54    | 5.69    | 6.30    | 6.39   | 6.27    | 6.23    | 6.56    | 6.74     | 6.86    | 6.46    | 6.42    | 6.25                      |
| 1913.... | 6.40    | 6.70    | 7.08    | 7.35    | 7.08   | 7.19    | 7.25    | 7.20    | 7.15     | 7.14    | 6.94    | 6.85    | 7.00                      |
| 1914.... | 7.05    | 7.27    | 7.37    | 7.40    | 7.29   | 7.22    | 7.41    | 7.63    | 7.58     | 7.14    | 6.80    | 6.61    | 7.19                      |
| 1915.... | 6.57    | 6.46    | 6.48    | 6.59    | 6.80   | 6.85    | 6.83    | 6.74    | 6.77     | 6.96    | 6.45    | 6.25    | 6.63                      |
| 1916.... | 6.42    | 6.94    | 7.53    | 7.85    | 7.98   | 8.00    | 8.04    | 8.05    | 8.38     | 8.04    | 8.09    | 8.15    | 7.77                      |
| 1917.... | 8.53    | 9.42    | 16.70   | 11.71   | 11.84  | 11.72   | 11.47   | 11.84   | 12.79    | 13.43   | 12.47   | 12.74   | 11.56                     |
| 1918.... | 12.59   | 12.65   | 13.06   | 13.55   | 13.83  | 13.62   | 13.68   | 14.21   | 14.50    | 13.79   | 13.37   | 13.40   | 13.49                     |
| 1919.... | 13.46   | 13.51   | 14.06   | 15.01   | 15.34  | 14.98   | 15.61   | 15.56   | 13.44    | 12.22   | 11.88   | 11.54   | 13.59                     |
| 1920.... | 12.14   | 12.43   | 12.52   | 12.72   | 12.41  | 12.31   | 12.40   | 12.12   | 12.22    | 11.67   | 10.34   | 8.48    | 11.69                     |
| 1921.... | 8.42    | 8.24    | 8.67    | 7.89    | 7.66   | 7.31    | 7.65    | 7.94    | 7.11     | 6.88    | 6.47    | 6.37    | 7.49                      |

<sup>1</sup> Weighted average.

<sup>2</sup> Prices 15th of month.

## PRICES OF ARTICLES BOUGHT BY FARMERS.

TABLE 410.—Prices of articles bought by farmers, 1909–1921, and purchasing power of 1 acre of crops.

| Article.                         | 1909   | 1914   | 1919   | 1920   | 1921   | Price per cent of 1914. |      |      | Purchasing power of 1 acre of crops, per cent of 1914. |      |      |
|----------------------------------|--------|--------|--------|--------|--------|-------------------------|------|------|--|------|------|
|                                  |        |        |        |        |        | 1909                    | 1920 | 1921 | 1909   | 1920 | 1921 |
| Axes.....each..                  | \$0.89 | \$0.96 | \$2.06 | \$2.25 | \$2.00 | 93                      | 234  | 207  | 99   | 60   | 43   |
| Barb wire.....100 pounds..       | 2.98   | 3.08   | 5.73   | 6.10   | 5.20   | 97                      | 198  | 189  | 95   | 71   | 52   |
| Barrels.....each..               |        | .25    | .50    | .76    | .51    |                         | 304  | 204  |  | 47   | 43   |
| Baskets.....do..                 |        |        |        | .60    | .50    |                         |      |      |  |      |      |
| Bone meal.....tons..             |        | 31.90  | 60.00  | 65.00  | 54.00  |                         | 204  | 169  |  | 69   | 52   |
| Brooms.....each..                | .34    | .38    | 1.00   | .98    | .78    | 89                      | 258  | 205  | 103  | 55   | 43   |
| Buggies.....do..                 | 64.90  | 70.10  | 123.00 | 131.00 | 108.00 | 93                      | 187  | 154  | 99   | 76   | 57   |
| Buggy whips.....do..             | .404   | .426   | .73    | .85    | .70    | 95                      | 200  | 164  | 97   | 71   | 54   |
| Calico.....yards..               | .06    | .063   | .23    | .227   | .142   | 95                      | 360  | 225  | 97   | 39   | 39   |
| Churns.....each..                | 2.19   | 2.30   | 2.90   | 3.25   | 3.00   | 95                      | 141  | 130  | 97   | 100  | 68   |
| Coal.....ton..                   | 5.50   | 5.80   | 9.50   | 13.30  | 11.50  | 95                      | 228  | 198  | 97   | 62   | 45   |
| Coal oil.....gallon..            | .157   | .139   | .22    | .25    | .19    | 113                     | 180  | 137  | 81   | 79   | 64   |
| Coffee.....pound..               | .211   | .245   | .46    | .41    | .32    | 86                      | 107  | 131  | 107  | 85   | 67   |
| Corn knives.....each..           | .27    | .26    | .58    | .65    | .55    | 93                      | 224  | 190  | 99   | 63   | 46   |
| Cream separators.....do..        | 63.10  | 59.30  | 95.00  | 102.00 | 90.00  | 106                     | 172  | 152  | 87   | 82   | 58   |
| Dinner plates.....dozen..        | .55    | .57    | 1.40   | 1.58   | 1.31   | 90                      | 277  | 230  | 96   | 51   | 38   |
| Dish pans.....each..             | .32    | .34    | .83    | .95    | .75    | 94                      | 279  | 221  | 98   | 51   | 40   |
| Dung forks.....do..              | .70    | .76    | 1.40   | 1.60   | 1.40   | 92                      | 211  | 184  | 100  | 67   | 48   |
| Fertilizer, commercial.....ton.. | 22.15  | 23.20  | 42.00  | 44.00  | 35.00  | 95                      | 190  | 151  | 97   | 74   | 58   |
| Flour.....barrel..               | 6.30   | 6.40   | 13.50  | 12.90  | 8.80   | 98                      | 202  | 137  | 94   | 70   | 64   |
| Fruit jars.....dozen..           | .73    | .74    | 1.15   | 1.25   | 1.16   | 99                      | 169  | 157  | 93   | 84   | 56   |
| Gasoline.....gallon..            | .202   | .179   | .29    | .33    | .285   | 113                     | 184  | 148  | 81   | 77   | 60   |
| Gloves, cotton.....pair..        |        |        | .26    | .27    | .19    |                         |      |      |  |      |      |
| Gloves, leather.....do..         |        |        | 1.78   | 1.85   | 1.30   |                         |      |      |  |      |      |
| Grind stones.....pound..         |        |        | .048   | .05    | .045   |                         |      |      |  |      |      |
| Halters.....each..               | .85    | .95    | 1.85   | 1.98   | 1.55   | 89                      | 208  | 163  | 103  | 68   | 54   |
| Harness, single.....do..         | 13.50  | 15.25  | 29.00  | 32.00  | 25.00  | 89                      | 210  | 164  | 103  | 67   | 54   |
| Harrows.....do..                 |        |        |        | 30.00  | 25.50  |                         |      |      |  |      |      |
| Hatchets.....do..                | .59    | .62    | 1.29   | 1.50   | 1.29   | 95                      | 242  | 208  | 97   | 58   | 42   |
| Hats, felt.....do..              | 1.94   | 2.03   | 4.30   | 5.00   | 3.50   | 96                      | 246  | 172  | 90   | 58   | 51   |
| Hoes.....do..                    | .41    | .45    | .83    | .93    | .80    | 91                      | 207  | 178  | 101  | 68   | 50   |
| Horse blankets.....do..          | 2.25   | 2.40   | 5.00   | 5.35   | 4.15   | 94                      | 228  | 173  | 98   | 63   | 51   |
| Jumpers.....do..                 | .77    | .83    | 2.50   | 2.50   | 1.55   | 93                      | 301  | 187  | 99   | 47   | 47   |
| Kitchen chairs.....do..          | .72    | .80    | 1.70   | 2.10   | 1.65   | 90                      | 262  | 206  | 102  | 54   | 43   |
| Lamps.....do..                   | .50    | .52    | .98    | 1.10   | .95    | 96                      | 212  | 183  | 96   | 67   | 48   |
| Lanterns.....do..                | .77    | .80    | 1.32   | 1.45   | 1.30   | 96                      | 181  | 162  | 96   | 78   | 55   |
| Lard.....pound..                 | .132   | .141   | .34    | .285   | .16    | 94                      | 188  | 113  | 98   | 75   | 78   |
| Lime.....barrel..                | 1.29   | 1.36   | 2.65   | 3.10   | 2.65   | 95                      | 228  | 195  | 97   | 62   | 45   |
| Linseed oil.....gallon..         | .79    | .82    | 2.50   | 2.21   | 1.22   | 95                      | 270  | 149  | 98   | 52   | 59   |
| Lumber, 1-inch.....100 feet..    | 1.95   | 2.10   | 4.75   | 5.15   | 3.55   | 93                      | 245  | 169  | 99   | 58   | 52   |
| Mannure spreaders.....each..     | 111.60 | 106.70 | 180.00 | 194.00 | 167.00 | 105                     | 182  | 157  | 87   | 78   | 56   |
| Men's suits.....do..             | 13.15  | 14.00  | 38.10  | 41.00  | 30.30  | 94                      | 203  | 216  | 98   | 48   | 41   |
| Milk cans, 10 gallon.....do..    | 2.40   | 2.45   | 6.00   | 6.20   | 5.30   | 98                      | 253  | 216  | 94   | 56   | 41   |
| Milk pails.....do..              | .43    | .45    | .80    | 1.00   | .80    | 99                      | 222  | 178  | 96   | 64   | 50   |
| Mowers.....do..                  | 44.30  | 46.50  | 84.00  | 88.00  | 78.00  | 95                      | 189  | 168  | 97   | 75   | 53   |
| Muslin.....yard..                | .09    | .093   | .31    | .30    | .18    | 97                      | 323  | 194  | 95   | 44   | 46   |
| Nails.....100 pounds..           | 3.34   | 3.40   | 6.50   | 7.30   | 5.75   | 98                      | 215  | 169  | 94   | 66   | 52   |
| Overalls.....pair..              | .82    | .89    | 2.60   | 2.60   | 1.58   | 92                      | 262  | 178  | 100  | 48   | 50   |
| Padlocks.....each..              | .27    | .275   | .50    | .60    | .50    | 98                      | 213  | 182  | 94   | 65   | 49   |
| Paint brushes.....do..           | .49    | .54    | 1.15   | 1.35   | 1.15   | 91                      | 250  | 213  | 101  | 57   | 41   |
| Paint, mixed.....gallon..        | 1.62   | 1.74   | 4.05   | 4.30   | 3.35   | 93                      | 247  | 193  | 99   | 57   | 46   |
| Paris green.....pound..          | .29    | .30    | .62    | .64    | .52    | 97                      | 213  | 173  | 95   | 66   | 51   |
| Picks.....each..                 | .71    | .72    | 1.40   | 1.60   | 1.22   | 99                      | 208  | 169  | 93   | 68   | 52   |
| Pincers.....do..                 | .49    | .51    | .95    | 1.10   | .90    | 96                      | 216  | 176  | 96   | 66   | 50   |
| Pitch forks.....do..             | .62    | .66    | 1.30   | 1.45   | 1.22   | 94                      | 220  | 185  | 98   | 64   | 48   |

## PRICES OF ARTICLES BOUGHT BY FARMERS—Continued.

TABLE 410.—Prices of articles bought by farmers, 1909–1921, and purchasing power of 1 acre of crops—Continued.

| Article.                            | 1909    | 1914    | 1919    | 1920    | 1921    | Price per cent of 1914. |      |      | Purchasing power of 1 acre of crops, per cent of 1914. |      |      |
|-------------------------------------|---------|---------|---------|---------|---------|-------------------------|------|------|--|------|------|
|                                     |         |         |         |         |         | 1909                    | 1920 | 1921 | 1909   | 1920 | 1921 |
| Plows, turning.....each..           | \$11.50 | \$12.10 | \$21.00 | \$23.00 | \$20.00 | 95                      | 190  | 165  | 97   | 74   | 54   |
| Portland cement,<br>100 pounds..... | .70     | .69     | 1.05    | 1.30    | 1.02    | 101                     | 188  | 148  | 91   | 75   | 60   |
| Raincoats.....each..                | 4.25    | 4.40    | 9.30    | 10.50   | 7.50    | 97                      | 239  | 170  | 95   | 59   | 52   |
| Rope, hemp.....pound..              | .135    | .149    | .36     | .355    | .28     | 91                      | 238  | 174  | 101  | 59   | 51   |
| Rubber boots.....pair..             | 3.55    | 3.75    | 5.10    | 5.30    | 4.55    | 95                      | 141  | 121  | 97   | 100  | 73   |
| Sacks, grain.....each..             | .15     | .163    | .45     | .42     | .26     | 92                      | 258  | 160  | 100  | 55   | 55   |
| Saddles.....do.....                 | 17.45   | 20.35   | 42.40   | 45.00   | 35.00   | 86                      | 221  | 172  | 107  | 64   | 51   |
| Salt, for stock.....barrel..        | 1.50    | 1.65    | 3.00    | 3.50    | 3.20    | 91                      | 212  | 194  | 101  | 67   | 46   |
| Saws, buck.....each..               | .89     | .92     | 1.75    | 1.90    | 1.50    | 97                      | 207  | 163  | 95   | 68   | 54   |
| Screw hooks.....box.....            |         | .37     | .75     | .91     | .71     |                         | 246  | 192  |  | 58   | 46   |
| Scythes.....each.....               | 1.02    | 1.06    | 1.82    | 2.10    | 1.85    | 96                      | 198  | 174  | 96   | 71   | 51   |
| Sheeting.....yard.....              | .17     | .18     | .53     | .57     | .40     | 94                      | 317  | 222  | 98   | 45   | 40   |
| Shingles.....M.....                 | 3.50    | 3.70    | 7.90    | 8.10    | 5.80    | 95                      | 219  | 157  | 97   | 65   | 56   |
| Shirts, flannel.....each..          | 1.34    | 1.41    | 3.85    | 3.90    | 2.85    | 95                      | 277  | 202  | 97   | 51   | 44   |
| Shoes.....pair.....                 | 2.00    | 2.30    | 4.75    | 5.00    | 3.65    | 87                      | 217  | 159  | 106  | 65   | 56   |
| Shot guns.....each.....             | 12.45   | 12.85   | 28.00   | 33.00   | 29.00   | 97                      | 257  | 226  | 95   | 55   | 39   |
| Shovels.....do.....                 | .74     | .78     | 1.62    | 1.85    | 1.55    | 95                      | 237  | 199  | 97   | 60   | 44   |
| Staples.....100 pounds..            | 3.69    | 3.75    | 6.80    | 7.60    | 6.20    | 98                      | 203  | 165  | 94   | 70   | 54   |
| Starch.....pound.....               | .07     | .07     | .118    | .125    | .103    | 100                     | 179  | 147  | 92   | 79   | 60   |
| Steel wire.....100 pounds..         | 3.43    | 3.55    | 6.90    | 7.30    | 6.00    | 97                      | 206  | 169  | 95   | 69   | 52   |
| Stoves.....each.....                | 22.50   | 24.00   | 50.00   | 61.00   | 52.00   | 94                      | 254  | 217  | 98   | 56   | 41   |
| Sugar.....pound.....                | .058    | .069    | .15     | .17     | .073    | 84                      | 246  | 106  | 109  | 53   | 83   |
| Sulphur.....do.....                 | .075    | .08     | .119    | .12     | .105    | 94                      | 150  | 131  | 98   | 94   | 67   |
| Tedders.....each.....               | 39.00   | 39.50   | 74.00   | 78.50   | 69.00   | 99                      | 199  | 175  | 93   | 71   | 50   |
| Tin pails.....do.....               | .25     | .27     | .59     | .56     | .50     | 93                      | 241  | 185  | 99   | 59   | 48   |
| Tobacco, plug.....pound..           | .45     | .45     | .93     | .94     | .85     | 100                     | 209  | 189  | 92   | 68   | 47   |
| Twine, binder.....do.....           | .103    | .112    | .258    | .20     | .16     | 92                      | 179  | 143  | 100  | 79   | 62   |
| Wagons, double.....each..           | 66.00   | 73.25   | 138.00  | 155.00  | 134.00  | 90                      | 211  | 183  | 102  | 67   | 48   |
| Wagons, single.....do.....          | 45.50   | 48.00   | 83.00   | 95.00   | 79.00   | 95                      | 198  | 165  | 97   | 71   | 54   |
| Walking cultivators.....do..        |         |         | 35.20   | 40.00   | 34.00   |                         |      |      |  |      |      |
| Wheel barrows.....do.....           | 2.80    | 2.97    | 5.50    | 6.50    | 5.50    | 94                      | 219  | 185  | 98   | 65   | 48   |
| Wire fence.....rod.....             | .311    | .317    | .59     | .64     | .53     | 98                      | 202  | 167  | 94   | 70   | 53   |
| Wooden buckets.....each..           | .31     | .35     | .93     | 1.05    | .90     | 89                      | 300  | 237  | 102  | 47   | 34   |
| Wooden wash tubs.....do....         | .77     | .83     | 1.75    | 1.90    | 1.50    | 93                      | 229  | 181  | 96   | 62   | 49   |
| Average.....                        |         |         |         |         |         | 95                      | 224  | 176  | 97   | 65   | 52   |

## FARM LABOR.

TABLE 411.—Wages of male farm labor by classes and States, 1910 and 1921.

| State and division.        | Per month.  |         |                |         | Per day at harvest. |        |                |        | Per day other than harvest. |        |                |        |
|----------------------------|-------------|---------|----------------|---------|---------------------|--------|----------------|--------|-----------------------------|--------|----------------|--------|
|                            | With board. |         | Without board. |         | With board.         |        | Without board. |        | With board.                 |        | Without board. |        |
|                            | 1921        | 1910    | 1921           | 1910    | 1921                | 1910   | 1921           | 1910   | 1921                        | 1910   | 1921           | 1910   |
| Maine.....                 | \$40.00     | \$23.50 | \$59.00        | \$34.50 | \$2.60              | \$1.50 | \$3.25         | \$1.95 | \$2.15                      | \$1.23 | \$2.80         | \$1.60 |
| New Hampshire.....         | 39.00       | 23.50   | 61.00          | 35.50   | 2.55                | 1.35   | 3.30           | 1.84   | 2.29                        | 1.18   | 2.95           | 1.65   |
| Vermont.....               | 39.00       | 25.00   | 56.50          | 35.50   | 2.45                | 1.75   | 3.10           | 2.25   | 2.10                        | 1.31   | 2.75           | 1.60   |
| Massachusetts.....         | 41.00       | 22.75   | 67.00          | 37.20   | 2.60                | 1.42   | 3.45           | 1.92   | 2.25                        | 1.22   | 3.05           | 1.66   |
| Rhode Island.....          | 43.00       | 21.00   | 68.00          | 34.00   | 2.90                | 1.35   | 3.75           | 2.05   | 2.45                        | 1.12   | 3.25           | 1.56   |
| Connecticut.....           | 40.00       | 21.00   | 67.00          | 36.00   | 2.55                | 1.55   | 3.40           | 2.00   | 2.10                        | 1.07   | 3.10           | 1.55   |
| New York.....              | 40.00       | 23.50   | 58.50          | 35.00   | 2.95                | 1.80   | 3.60           | 2.22   | 2.40                        | 1.29   | 3.05           | 1.66   |
| New Jersey.....            | 37.00       | 19.50   | 59.50          | 31.50   | 3.00                | 1.70   | 3.95           | 2.15   | 2.20                        | 1.11   | 2.95           | 1.46   |
| Pennsylvania.....          | 35.00       | 18.75   | 52.00          | 29.00   | 2.60                | 1.50   | 3.25           | 1.96   | 2.05                        | 1.04   | 2.70           | 1.49   |
| North Atlantic.....        | 38.06       | 21.65   | 57.25          | 33.19   | 2.73                | 1.63   | 3.45           | 2.08   | 2.20                        | 1.17   | 2.90           | 1.58   |
| Delaware.....              | 30.00       | 16.00   | 45.00          | 24.75   | 2.40                | 1.35   | 2.80           | 1.55   | 1.69                        | .98    | 2.05           | 1.22   |
| Maryland.....              | 29.00       | 13.50   | 43.00          | 21.50   | 2.35                | 1.26   | 2.95           | 1.64   | 1.60                        | .88    | 2.15           | 1.18   |
| Virginia.....              | 26.00       | 14.00   | 37.00          | 19.50   | 1.95                | 1.15   | 2.40           | 1.44   | 1.40                        | .79    | 1.80           | 1.01   |
| West Virginia.....         | 33.50       | 19.40   | 48.10          | 29.00   | 2.30                | 1.28   | 2.95           | 1.65   | 1.70                        | .94    | 2.30           | 1.27   |
| North Carolina.....        | 22.00       | 13.60   | 32.00          | 19.50   | 1.50                | 1.03   | 1.80           | 1.28   | 1.25                        | .73    | 1.60           | .97    |
| South Carolina.....        | 17.00       | 12.00   | 24.00          | 16.50   | 1.26                | .96    | 1.48           | 1.12   | .94                         | .70    | 1.17           | .90    |
| Georgia.....               | 16.50       | 13.00   | 24.10          | 18.00   | 1.17                | .98    | 1.47           | 1.23   | .94                         | .73    | 1.20           | .95    |
| Florida.....               | 24.00       | 15.00   | 35.40          | 25.00   | 1.35                | 1.10   | 1.85           | 1.46   | 1.20                        | .96    | 1.70           | 1.32   |
| South Atlantic.....        | 22.33       | 13.77   | 32.26          | 19.75   | 1.59                | 1.07   | 1.97           | 1.33   | 1.22                        | .77    | 1.58           | 1.04   |
| Ohio.....                  | 33.40       | 21.00   | 46.00          | 29.00   | 2.65                | 1.67   | 3.32           | 2.07   | 2.05                        | 1.20   | 2.62           | 1.57   |
| Indiana.....               | 31.50       | 20.50   | 44.00          | 28.40   | 2.58                | 1.70   | 3.15           | 2.07   | 1.70                        | 1.14   | 2.32           | 1.45   |
| Illinois.....              | 36.30       | 24.50   | 49.40          | 32.90   | 2.85                | 1.90   | 3.44           | 2.30   | 2.08                        | 1.31   | 2.60           | 1.63   |
| Michigan.....              | 34.30       | 23.00   | 50.50          | 33.00   | 2.60                | 1.64   | 3.30           | 2.10   | 2.05                        | 1.22   | 2.65           | 1.66   |
| Wisconsin.....             | 39.20       | 26.00   | 56.00          | 37.25   | 2.65                | 1.76   | 3.40           | 2.20   | 2.20                        | 1.35   | 2.90           | 1.78   |
| N. C. east of Miss. R..... | 34.98       | 22.94   | 48.84          | 31.81   | 2.68                | 1.75   | 3.33           | 2.16   | 2.04                        | 1.24   | 2.61           | 1.61   |
| Minnesota.....             | 37.00       | 26.00   | 53.10          | 38.00   | 3.00                | 2.23   | 3.90           | 2.65   | 2.35                        | 1.48   | 3.20           | 1.90   |
| Iowa.....                  | 39.60       | 28.00   | 52.50          | 39.00   | 2.78                | 2.12   | 3.40           | 2.51   | 2.18                        | 1.57   | 2.74           | 1.80   |
| Missouri.....              | 30.70       | 21.60   | 41.90          | 29.50   | 2.40                | 1.55   | 2.90           | 1.93   | 1.50                        | 1.02   | 2.00           | 1.32   |
| North Dakota.....          | 40.00       | 29.00   | 60.20          | 42.00   | 3.70                | 2.49   | 4.75           | 3.03   | 2.55                        | 1.60   | 3.50           | 2.20   |
| South Dakota.....          | 36.50       | 27.00   | 53.50          | 39.00   | 3.00                | 2.35   | 3.75           | 2.95   | 2.15                        | 1.54   | 2.95           | 2.00   |
| Nebraska.....              | 35.00       | 26.50   | 50.00          | 38.00   | 3.15                | 2.14   | 3.85           | 2.60   | 2.15                        | 1.67   | 2.80           | 1.96   |
| Kansas.....                | 35.00       | 24.00   | 50.70          | 34.00   | 4.00                | 2.18   | 4.70           | 2.57   | 2.40                        | 1.42   | 3.00           | 1.84   |
| N. C. west of Miss. R..... | 35.53       | 25.10   | 46.90          | 35.45   | 3.03                | 2.01   | 3.72           | 2.43   | 2.06                        | 1.38   | 2.73           | 1.77   |
| Kentucky.....              | 25.70       | 16.00   | 35.70          | 23.10   | 1.90                | 1.36   | 2.47           | 1.71   | 1.20                        | .88    | 1.60           | 1.12   |
| Tennessee.....             | 23.60       | 14.00   | 33.00          | 20.00   | 1.70                | 1.14   | 2.05           | 1.44   | 1.14                        | .77    | 2.47           | 1.02   |
| Alabama.....               | 17.00       | 13.00   | 24.70          | 18.50   | 1.15                | .98    | 1.45           | 1.26   | .98                         | .85    | 1.25           | 1.05   |
| Mississippi.....           | 18.00       | 13.30   | 25.10          | 19.50   | 1.00                | .93    | 1.35           | 1.22   | 1.00                        | .83    | 1.35           | 1.10   |
| Louisiana.....             | 19.90       | 13.50   | 30.70          | 20.25   | 1.22                | .90    | 1.55           | 1.25   | 1.15                        | .77    | 1.43           | 1.02   |
| Texas.....                 | 26.00       | 18.00   | 39.00          | 24.50   | 1.80                | 1.22   | 2.20           | 1.67   | 1.33                        | 1.04   | 1.77           | 1.32   |
| Oklahoma.....              | 27.30       | 19.10   | 40.80          | 28.10   | 2.60                | 1.60   | 3.20           | 1.97   | 1.75                        | 1.11   | 2.20           | 1.47   |
| Arkansas.....              | 21.70       | 16.25   | 32.00          | 24.00   | 1.50                | 1.20   | 1.95           | 1.55   | 1.13                        | .90    | 1.50           | 1.20   |
| South Central.....         | 22.72       | 15.23   | 33.10          | 21.90   | 1.63                | 1.14   | 2.04           | 1.47   | 1.21                        | .89    | 1.70           | 1.15   |
| Montana.....               | 42.10       | 38.00   | 63.00          | 50.00   | 2.92                | 2.05   | 3.65           | 2.80   | 2.21                        | 1.77   | 2.98           | 2.36   |
| Wyoming.....               | 41.00       | 35.00   | 62.00          | 49.00   | 2.80                | 1.90   | 3.30           | 2.50   | 2.10                        | 1.73   | 2.90           | 2.29   |
| Colorado.....              | 38.60       | 29.50   | 58.60          | 44.50   | 2.70                | 1.95   | 3.50           | 2.47   | 2.11                        | 1.47   | 2.85           | 2.00   |
| New Mexico.....            | 37.00       | 24.50   | 52.50          | 34.25   | 2.20                | 1.46   | 2.25           | 1.88   | 1.50                        | 1.12   | 2.10           | 1.53   |
| Arizona.....               | 40.00       | 30.00   | 60.00          | 40.00   | 2.25                | 1.72   | 3.00           | 2.24   | 1.75                        | 1.34   | 2.50           | 2.04   |
| Utah.....                  | 51.50       | 35.00   | 69.50          | 47.50   | 2.55                | 1.78   | 3.15           | 2.20   | 2.90                        | 1.55   | 2.90           | 2.00   |
| Nevada.....                | 50.00       | 37.00   | 75.00          | 44.00   | 2.60                | 1.82   | 3.50           | 2.38   | 2.25                        | 1.39   | 3.35           | 1.96   |
| Idaho.....                 | 47.00       | 35.00   | 67.00          | 40.50   | 2.80                | 2.20   | 3.60           | 2.30   | 2.25                        | 1.70   | 3.05           | 2.27   |
| Washington.....            | 45.00       | 33.00   | 65.00          | 39.00   | 3.30                | 2.42   | 4.00           | 2.78   | 2.40                        | 1.72   | 3.20           | 2.26   |
| Oregon.....                | 44.50       | 32.00   | 65.00          | 44.50   | 2.75                | 2.12   | 3.50           | 2.60   | 2.18                        | 1.51   | 2.90           | 2.07   |
| California.....            | 55.00       | 33.00   | 79.00          | 47.00   | 3.10                | 1.08   | 3.90           | 2.48   | 2.55                        | 1.44   | 3.35           | 2.02   |
| Far Western.....           | 47.29       | 32.69   | 68.01          | 46.48   | 2.87                | 2.02   | 3.63           | 2.52   | 2.26                        | 1.51   | 3.01           | 2.06   |
| United States.....         | 30.14       | 19.21   | 43.32          | 27.50   | 2.24                | 1.45   | 2.79           | 1.82   | 1.68                        | 1.00   | 2.22           | 1.83   |

## FARM LABOR—Continued.

TABLE 412.—Wages of classes of male farm labor, yearly, in United States, 1910-1921.

| Year.                         | By the month.. |                 | Day labor at harvest. |                 | Day labor not harvest. |                 |
|-------------------------------|----------------|-----------------|-----------------------|-----------------|------------------------|-----------------|
|                               | With board..   | Without board.. | With board..          | Without board.. | With board..           | Without board.. |
| <b>United States:</b>         |                |                 |                       |                 |                        |                 |
| 1910.....                     | \$19.21        | \$27.50         | \$1.45                | \$1.82          | \$1.06                 | \$1.83          |
| 1911.....                     | 20.18          | 28.77           | 1.49                  | 1.85            | 1.09                   | 1.42            |
| 1912.....                     | 20.81          | 29.58           | 1.54                  | 1.87            | 1.14                   | 1.47            |
| 1913.....                     | 21.38          | 30.31           | 1.57                  | 1.94            | 1.16                   | 1.50            |
| 1914.....                     | 21.05          | 29.88           | 1.55                  | 1.91            | 1.13                   | 1.45            |
| 1915.....                     | 21.26          | 30.15           | 1.56                  | 1.92            | 1.13                   | 1.47            |
| 1916.....                     | 23.25          | 32.83           | 1.69                  | 2.07            | 1.26                   | 1.62            |
| 1917.....                     | 23.87          | 40.43           | 2.08                  | 2.54            | 1.56                   | 2.02            |
| 1918.....                     | 34.92          | 48.80           | 2.65                  | 3.22            | 2.07                   | 2.63            |
| 1919.....                     | 39.82          | 56.29           | 3.15                  | 3.53            | 2.45                   | 3.12            |
| 1920.....                     | 46.89          | 64.95           | 3.60                  | 4.36            | 2.86                   | 3.59            |
| 1921.....                     | 36.14          | 48.32           | 2.24                  | 2.79            | 1.68                   | 2.22            |
| <b>North Atlantic States:</b> |                |                 |                       |                 |                        |                 |
| 1913.....                     | 23.45          | 35.29           | 1.67                  | 2.12            | 1.30                   | 1.71            |
| 1919.....                     | 42.18          | 63.39           | 3.09                  | 3.56            | 2.59                   | 3.30            |
| 1920.....                     | 51.92          | 75.54           | 3.78                  | 4.68            | 3.20                   | 4.01            |
| 1921.....                     | 38.06          | 57.25           | 2.73                  | 3.45            | 2.20                   | 2.90            |
| <b>North Central, East:</b>   |                |                 |                       |                 |                        |                 |
| 1913.....                     | 24.52          | 33.78           | 1.88                  | 2.29            | 1.36                   | 1.75            |
| 1919.....                     | 42.12          | 58.90           | 3.56                  | 4.32            | 2.71                   | 3.44            |
| 1920.....                     | 51.49          | 70.09           | 4.17                  | 5.00            | 3.22                   | 4.01            |
| 1921.....                     | 34.98          | 48.84           | 2.68                  | 3.33            | 2.04                   | 2.61            |
| <b>North Central, West:</b>   |                |                 |                       |                 |                        |                 |
| 1913.....                     | 26.00          | 36.08           | 2.12                  | 2.54            | 1.48                   | 1.91            |
| 1919.....                     | 50.29          | 68.10           | 4.48                  | 5.33            | 3.23                   | 4.03            |
| 1920.....                     | 59.03          | 79.79           | 5.03                  | 5.94            | 3.78                   | 4.67            |
| 1921.....                     | 38.53          | 49.90           | 3.08                  | 3.72            | 2.09                   | 2.73            |
| <b>South Atlantic:</b>        |                |                 |                       |                 |                        |                 |
| 1913.....                     | 15.88          | 22.62           | 1.16                  | 1.45            | .85                    | 1.09            |
| 1919.....                     | 30.54          | 44.03           | 2.28                  | 2.83            | 1.85                   | 2.39            |
| 1920.....                     | 38.75          | 50.50           | 2.69                  | 3.30            | 2.13                   | 2.74            |
| 1921.....                     | 22.33          | 32.28           | 1.59                  | 1.97            | 1.22                   | 1.53            |
| <b>South Central:</b>         |                |                 |                       |                 |                        |                 |
| 1913.....                     | 16.70          | 23.35           | 1.21                  | 1.51            | .93                    | 1.13            |
| 1919.....                     | 32.42          | 46.47           | 2.58                  | 3.14            | 2.06                   | 2.61            |
| 1920.....                     | 36.53          | 51.94           | 2.80                  | 3.41            | 2.29                   | 2.89            |
| 1921.....                     | 28.72          | 33.10           | 1.68                  | 2.04            | 1.21                   | 1.70            |
| <b>Far West:</b>              |                |                 |                       |                 |                        |                 |
| 1913.....                     | 33.52          | 48.17           | 2.02                  | 2.53            | 1.52                   | 2.07            |
| 1919.....                     | 62.06          | 87.12           | 3.80                  | 4.67            | 3.09                   | 4.02            |
| 1920.....                     | 73.21          | 99.43           | 4.48                  | 5.39            | 3.66                   | 4.61            |
| 1921.....                     | 47.29          | 68.01           | 2.87                  | 3.63            | 2.26                   | 3.01            |

## HOW FARM LABOR IS HIRED.

Of the total labor hired on farms of the United States, the percentage which is hired by the month, by the day, with board and without board, is estimated as follows, based upon reports of crop reporters of the Bureau of Crop Estimates:

TABLE 413.—Percentage of total hired labor, by divisions.

| Item.                                | United States.   | North Atlantic. <sup>1</sup> | North Central, east. <sup>2</sup> | North Central, west. <sup>3</sup> | South Atlantic. <sup>4</sup> | South Central. <sup>5</sup> | West. <sup>6</sup> |
|--------------------------------------|------------------|------------------------------|-----------------------------------|-----------------------------------|------------------------------|-----------------------------|--------------------|
| <b>Hired by the—</b>                 |                  |                              |                                   |                                   |                              |                             |                    |
| <b>Month—</b>                        | <i>Per cent.</i> | <i>Per cent.</i>             | <i>Per cent.</i>                  | <i>Per cent.</i>                  | <i>Per cent.</i>             | <i>Per cent.</i>            | <i>Per cent.</i>   |
| With board.....                      | 36.1             | 39.3                         | 44.8                              | 52.7                              | 33.7                         | 29.0                        | 37.4               |
| Without board.....                   | 15.5             | 16.5                         | 15.1                              | 9.4                               | 17.2                         | 17.0                        | 9.5                |
| <b>Day, excluding extra harvest—</b> |                  |                              |                                   |                                   |                              |                             |                    |
| With board.....                      | 15.3             | 14.2                         | 15.5                              | 13.8                              | 17.4                         | 14.8                        | 13.7               |
| Without board.....                   | 15.7             | 13.7                         | 9.2                               | 4.8                               | 16.6                         | 21.0                        | 14.9               |
| <b>Day, harvest labor—</b>           |                  |                              |                                   |                                   |                              |                             |                    |
| With board.....                      | 10.5             | 9.0                          | 10.8                              | 15.9                              | 8.3                          | 9.7                         | 10.9               |
| Without board.....                   | 6.9              | 7.3                          | 4.6                               | 3.4                               | 6.8                          | 8.5                         | 7.6                |
|                                      | 100.0            | 100.0                        | 100.0                             | 100.0                             | 100.0                        | 100.0                       | 100.0              |
| <b>Hired with board.....</b>         | 61.9             | 62.5                         | 71.1                              | 82.4                              | 59.4                         | 53.5                        | 68.0               |
| <b>Hired without board.....</b>      | 38.1             | 37.5                         | 28.9                              | 17.6                              | 40.6                         | 46.5                        | 32.0               |

<sup>1</sup> Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania.

<sup>2</sup> Ohio, Indiana, Illinois, Michigan, Wisconsin.

<sup>3</sup> Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

<sup>4</sup> Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

<sup>5</sup> Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma, Arkansas.

<sup>6</sup> Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, California.

## FARM LABOR SUPPLY AND DEMAND.

TABLE 414.—Farm labor supply and demand, 1919-1922.

| Division.                | Farm labor supply,<br>per cent of normal. |      |       |       | Farm labor demand,<br>per cent of normal. |       |      |      | Per cent of supply to<br>demand. |      |       |       |
|--------------------------|---|------|-------|-------|---|-------|------|------|----------------------------------|------|-------|-------|
|                          | 1919                                      | 1920 | 1921  | 1922  | 1919                                      | 1920  | 1921 | 1922 | 1919                             | 1920 | 1921  | 1922  |
| North Atlantic.....      | 82.8                                      | 82.3 | 92.1  | 99.2  | 101.0                                     | 107.8 | 92.7 | 94.8 | 81.9                             | 87.8 | 99.4  | 104.6 |
| South Atlantic.....      | 81.9                                      | 72.5 | 94.3  | 97.3  | 103.9                                     | 107.4 | 86.6 | 88.4 | 78.8                             | 67.5 | 103.9 | 110.1 |
| N. Cent. E. Miss. R..... | 86.6                                      | 68.4 | 95.1  | 101.4 | 101.2                                     | 106.6 | 91.2 | 91.0 | 85.6                             | 64.2 | 104.3 | 111.4 |
| N. Cent. W. Miss. R..... | 85.6                                      | 77.8 | 96.6  | 101.1 | 100.9                                     | 103.4 | 89.1 | 89.3 | 84.8                             | 75.2 | 108.4 | 113.2 |
| South Central.....       | 83.2                                      | 72.8 | 91.3  | 97.1  | 101.3                                     | 104.2 | 83.0 | 86.6 | 82.1                             | 69.9 | 113.6 | 112.1 |
| Far Western.....         | 90.0                                      | 82.1 | 102.3 | 107.0 | 102.4                                     | 101.5 | 89.9 | 89.9 | 87.9                             | 80.9 | 114.0 | 119.0 |
| United States.....       | 84.4                                      | 72.4 | 95.2  | 99.5  | 101.8                                     | 105.3 | 87.5 | 89.3 | 82.9                             | 68.8 | 106.8 | 111.4 |

## VALUE OF PLOW LANDS.

TABLE 415.—Value of plow lands, by States, 1919-1922.

| State.              | Average of poor plow<br>lands. |      |      |      | Average of good plow<br>lands. |      |      |      | Average of all plow<br>lands. |      |      |      |
|---------------------|--------------------------------|------|------|------|--------------------------------|------|------|------|-------------------------------|------|------|------|
|                     | 1919                           | 1920 | 1921 | 1922 | 1919                           | 1920 | 1921 | 1922 | 1919                          | 1920 | 1921 | 1922 |
| Maine.....          | \$24                           | \$30 | \$25 | \$22 | \$50                           | \$56 | \$50 | \$47 | \$39                          | \$42 | \$38 | \$35 |
| New Hampshire.....  | 23                             | 24   | 24   | 25   | 54                             | 64   | 63   | 64   | 37                            | 42   | 31   | 41   |
| Vermont.....        | 30                             | 30   | 29   | 27   | 64                             | 69   | 67   | 63   | 44                            | 48   | 47   | 45   |
| Massachusetts.....  | 41                             | 40   | 40   | 39   | 92                             | 103  | 98   | 103  | 68                            | 72   | 69   | 69   |
| Rhode Island.....   | 47                             | 50   | 50   | 50   | 92                             | 105  | 105  | 105  | 73                            | 85   | 85   | 86   |
| Connecticut.....    | 37                             | 35   | 34   | 32   | 80                             | 100  | 90   | 90   | 55                            | 60   | 58   | 58   |
| New York.....       | 38                             | 39   | 40   | 38   | 80                             | 84   | 84   | 83   | 60                            | 64   | 65   | 62   |
| New Jersey.....     | 50                             | 50   | 55   | 48   | 103                            | 104  | 125  | 109  | 76                            | 80   | 92   | 84   |
| Pennsylvania.....   | 38                             | 40   | 39   | 38   | 79                             | 86   | 81   | 73   | 60                            | 66   | 62   | 54   |
| Delaware.....       | 36                             | 44   | 38   | 31   | 70                             | 86   | 72   | 67   | 55                            | 66   | 56   | 50   |
| Maryland.....       | 39                             | 46   | 31   | 31   | 66                             | 82   | 70   | 67   | 58                            | 60   | 51   | 49   |
| Virginia.....       | 31                             | 34   | 32   | 27   | 62                             | 73   | 70   | 60   | 47                            | 53   | 50   | 43   |
| West Virginia.....  | 29                             | 32   | 31   | 27   | 64                             | 75   | 70   | 62   | 44                            | 51   | 48   | 42   |
| North Carolina..... | 31                             | 42   | 36   | 33   | 67                             | 87   | 76   | 67   | 50                            | 63   | 55   | 49   |
| South Carolina..... | 27                             | 41   | 32   | 28   | 56                             | 82   | 68   | 46   | 45                            | 61   | 50   | 35   |
| Georgia.....        | 24                             | 30   | 23   | 18   | 49                             | 63   | 50   | 38   | 38                            | 46   | 36   | 28   |
| Florida.....        | 21                             | 23   | 25   | 21   | 48                             | 53   | 55   | 56   | 33                            | 36   | 40   | 37   |
| Ohio.....           | 63                             | 69   | 60   | 52   | 113                            | 132  | 110  | 100  | 91                            | 105  | 88   | 78   |
| Indiana.....        | 68                             | 80   | 71   | 56   | 126                            | 150  | 137  | 108  | 100                           | 119  | 109  | 85   |
| Illinois.....       | 100                            | 115  | 105  | 91   | 170                            | 213  | 195  | 160  | 144                           | 170  | 167  | 131  |
| Michigan.....       | 40                             | 41   | 41   | 39   | 76                             | 80   | 83   | 77   | 61                            | 64   | 65   | 60   |
| Wisconsin.....      | 60                             | 66   | 65   | 58   | 110                            | 125  | 122  | 110  | 89                            | 100  | 98   | 87   |
| Minnesota.....      | 59                             | 73   | 74   | 67   | 83                             | 120  | 131  | 102  | 78                            | 100  | 101  | 87   |
| Iowa.....           | 129                            | 157  | 145  | 119  | 196                            | 257  | 238  | 193  | 169                           | 219  | 200  | 163  |
| Missouri.....       | 51                             | 60   | 68   | 44   | 91                             | 110  | 106  | 84   | 72                            | 87   | 88   | 65   |
| North Dakota.....   | 28                             | 31   | 30   | 25   | 43                             | 49   | 49   | 44   | 37                            | 43   | 42   | 37   |
| South Dakota.....   | 50                             | 67   | 66   | 52   | 77                             | 108  | 102  | 80   | 67                            | 90   | 85   | 73   |
| Nebraska.....       | 67                             | 85   | 80   | 72   | 115                            | 150  | 140  | 123  | 95                            | 125  | 115  | 101  |
| Kansas.....         | 44                             | 50   | 50   | 43   | 77                             | 99   | 90   | 77   | 61                            | 70   | 70   | 60   |
| Kentucky.....       | 37                             | 42   | 33   | 28   | 80                             | 95   | 75   | 67   | 61                            | 70   | 53   | 47   |
| Tennessee.....      | 31                             | 40   | 35   | 28   | 75                             | 90   | 81   | 68   | 53                            | 60   | 55   | 47   |
| Alabama.....        | 17                             | 20   | 17   | 14   | 33                             | 43   | 38   | 32   | 24                            | 30   | 26   | 23   |
| Mississippi.....    | 16                             | 23   | 16   | 16   | 34                             | 49   | 36   | 34   | 26                            | 35   | 26   | 25   |
| Louisiana.....      | 25                             | 34   | 24   | 21   | 44                             | 65   | 50   | 42   | 33                            | 50   | 38   | 31   |
| Texas.....          | 27                             | 35   | 33   | 29   | 58                             | 72   | 70   | 60   | 46                            | 56   | 52   | 47   |
| Oklahoma.....       | 24                             | 30   | 29   | 26   | 51                             | 63   | 63   | 58   | 38                            | 47   | 46   | 41   |
| Arkansas.....       | 22                             | 25   | 24   | 20   | 50                             | 65   | 54   | 46   | 38                            | 45   | 38   | 33   |
| Montana.....        | 21                             | 21   | 19   | 15   | 45                             | 48   | 41   | 35   | 34                            | 36   | 30   | 23   |
| Wyoming.....        | 26                             | 34   | 25   | 23   | 53                             | 70   | 60   | 54   | 43                            | 53   | 44   | 37   |
| Colorado.....       | 36                             | 40   | 35   | 35   | 80                             | 88   | 86   | 84   | 60                            | 66   | 67   | 61   |
| New Mexico.....     | 30                             | 30   | 30   | 23   | 60                             | 60   | 60   | 57   | 45                            | 45   | 45   | 41   |
| Arizona.....        | 60                             | 80   | 75   | 70   | 125                            | 180  | 140  | 130  | 100                           | 130  | 120  | 115  |
| Utah.....           | 55                             | 60   | 50   | 42   | 125                            | 135  | 140  | 125  | 95                            | 103  | 100  | 90   |
| Nevada.....         | 50                             | 46   | 45   | 40   | 110                            | 110  | 90   | 80   | 85                            | 80   | 75   | 70   |
| Idaho.....          | 50                             | 60   | 58   | 50   | 98                             | 135  | 128  | 110  | 76                            | 105  | 99   | 85   |
| Washington.....     | 60                             | 68   | 63   | 52   | 121                            | 150  | 140  | 120  | 95                            | 115  | 105  | 90   |
| Oregon.....         | 53                             | 60   | 60   | 55   | 103                            | 130  | 135  | 110  | 81                            | 100  | 103  | 90   |
| California.....     | 69                             | 70   | 75   | 69   | 165                            | 175  | 200  | 193  | 121                           | 130  | 135  | 128  |
| United States.....  | 51                             | 61   | 57   | 47   | 92                             | 113  | 106  | 89   | 74                            | 90   | 84   | 70   |

## TRENDS IN AGRICULTURAL STATISTICAL DATA.

TABLE 416.—Trends in agricultural statistical data.

| Year.                       | Index numbers, basis, 100=5-year average, 1900-1913. |             |              |                    |                       |                       |                       |                      |
|-----------------------------|--|-------------|--------------|--------------------|-----------------------|-----------------------|-----------------------|----------------------|
|                             | Land values.   | Farm wages. | Crop prices. | Live-stock prices. | Crops and live stock. | Crop values per acre. | Articles farmers buy. | Crop yield per acre. |
| 1899.....                   | 45   | 68          | .....        | .....              | .....                 | 57                    | 86                    | .....                |
| 1900.....                   | 93   | 98          | 101          | 95                 | 98                    | 101                   | 97                    | 101                  |
| 1910.....                   | 96   | 95          | 99           | 108                | 103                   | 98                    | 99                    | 101                  |
| 1911.....                   | 99   | 99          | 101          | 90                 | 96                    | 97                    | 100                   | 93                   |
| 1912.....                   | 103  | 102         | 101          | 98                 | 100                   | 101                   | 102                   | 110                  |
| 1913.....                   | 109  | 105         | 98           | 110                | 104                   | 104                   | 103                   | 95                   |
| 1914.....                   | 111  | 104         | 101          | 112                | 107                   | 103                   | 103                   | 105                  |
| 1915.....                   | 123  | 105         | 101          | 104                | 102                   | 108                   | 112                   | 110                  |
| 1916.....                   | 136  | 114         | 124          | 122                | 123                   | 142                   | 125                   | 97                   |
| 1917.....                   | 153  | 142         | 198          | 181                | 189                   | 209                   | 153                   | 104                  |
| 1918.....                   | 167  | 176         | 212          | 211                | 211                   | 212                   | 183                   | 100                  |
| 1919.....                   | 202  | 207         | 221          | 212                | 217                   | 232                   | 212                   | 102                  |
| 1920.....                   | 184  | 230         | 208          | 183                | 195                   | 148                   | 231                   | 107                  |
| 1921.....                   | 156  | 149         | 103          | 117                | 110                   | 114                   | 181                   | 94                   |
| * Percentage change yearly. |  |             |              |                    |                       |                       |                       |                      |
| 1910.....                   | + 3  | - 4         | - 2          | +14                | + 6                   | - 3                   | + 2                   | + 1                  |
| 1911.....                   | + 3  | + 5         | + 2          | -16                | - 7                   | - 1                   | + 1                   | - 9                  |
| 1912.....                   | + 5  | + 3         | 0            | + 8                | + 4                   | + 5                   | + 2                   | +19                  |
| 1913.....                   | + 5  | + 3         | - 3          | +12                | + 4                   | + 2                   | + 1                   | -13                  |
| 1914.....                   | + 2  | - 2         | + 3          | + 3                | + 3                   | 0                     | 0                     | +10                  |
| 1915.....                   | +11  | + 1         | 0            | - 8                | - 4                   | + 5                   | + 9                   | + 6                  |
| 1916.....                   | +11  | + 9         | +23          | +17                | +20                   | +31                   | +12                   | -12                  |
| 1917.....                   | +13  | +24         | +60          | +49                | +54                   | +47                   | +22                   | + 7                  |
| 1918.....                   | + 9  | +24         | + 7          | +17                | +12                   | + 1                   | +23                   | - 4                  |
| 1919.....                   | +21  | +18         | + 4          | + 1                | + 3                   | + 9                   | +13                   | + 2                  |
| 1920.....                   | - 9  | +11         | - 6          | -14                | -10                   | -36                   | + 9                   | + 5                  |
| 1921.....                   | -15  | -35         | -50          | -36                | -44                   | -23                   | -22                   | -12                  |

NOTE.—Land values are obtained on Mar. 1 following the year shown on stub of tabulation; figures may be regarded as representing approximately values at the close of the years indicated, rather than average for entire year. Wage statistics are collected on Mar. 1 of the following year (1919 data collected in December); they are presumed to represent the average for the calendar year shown on stub, but they are probably influenced somewhat more by conditions in the last half of the year than by the first half. Crop prices and live-stock prices are calendar-year averages, obtained from monthly prices properly weighted. Figures for crops and live stock are the averages of the crop prices and live-stock figures as shown separately. The ratio of the value of all crops to the value of all live-stock products is usually about 6 to 4; but of total farm sales about 40 per cent are crops, 56 per cent live stock and live-stock products, and 4 per cent miscellaneous. Crop values per acre are obtained by dividing the total value of the year's crop production based upon Dec. 1 prices by the total acres producing the crops. Prices of articles which farmers buy are obtained at the close of the year indicated; although they are assumed to be averages for the year, they probably are influenced more by conditions in the latter part than in the early part of the year.



## GAS, ELECTRIC LIGHT, AND TELEPHONES ON FARMS.

TABLE 417.—Number of farms reporting gas and electric light, census of 1920.

[States arranged in order of size of percentage.]

| State.                    | Number of farms reporting use of gas or electric light. | Per cent of all farms. | State.            | Number of farms reporting use of gas or electric light. | Per cent of all farms. | State.              | Number of farms reporting use of gas or electric light. | Per cent of all farms. |
|---------------------------|---|------------------------|-------------------|---|------------------------|---------------------|---|------------------------|
| Utah.....                 | 11,125  | 43.4                   | Oregon.....       | 5,463   | 10.9                   | Florida.....        | 2,042   | 3.8                    |
| Massachusetts.....        | 9,062   | 28.3                   | Indiana.....      | 20,584  | 10.0                   | Oklahoma.....       | 7,010   | 3.7                    |
| California.....           | 30,519  | 25.9                   | Illinois.....     | 23,273  | 9.8                    | Montana.....        | 2,013   | 3.5                    |
| District of Columbia..... | 52  | 25.5                   | Nebraska.....     | 12,062  | 9.7                    | Alabama.....        | 8,345   | 3.3                    |
| Connecticut.....          | 3,903   | 17.5                   | Maine.....        | 4,625   | 9.6                    | North Carolina..... | 8,005   | 3.0                    |
| Rhode Island.....         | 700   | 17.1                   | Wisconsin.....    | 16,574  | 8.8                    | South Carolina..... | 5,170   | 2.7                    |
| Iowa.....                 | 32,552  | 15.3                   | Kansas.....       | 14,390  | 8.7                    | Kentucky.....       | 5,925   | 2.2                    |
| New Jersey.....           | 4,551   | 15.3                   | South Dakota..... | 6,445   | 8.6                    | Texas.....          | 8,228   | 1.9                    |
| Pennsylvania.....         | 30,689  | 15.2                   | Michigan.....     | 15,695  | 8.0                    | Georgia.....        | 5,826   | 1.9                    |
| West Virginia.....        | 12,900  | 14.8                   | Minnesota.....    | 13,539  | 7.6                    | Tennessee.....      | 4,554   | 1.8                    |
| Ohio.....                 | 37,745  | 14.7                   | Maryland.....     | 3,330   | 7.0                    | New Mexico.....     | 422   | 1.4                    |
| Idaho.....                | 5,982   | 14.2                   | Colorado.....     | 3,925   | 6.5                    | Louisiana.....      | 1,471   | 1.1                    |
| Washington.....           | 9,178   | 13.8                   | Arizona.....      | 925   | 6.0                    | Mississippi.....    | 2,896   | 1.1                    |
| New York.....             | 24,882  | 12.9                   | North Dakota..... | 4,518   | 5.8                    | Arkansas.....       | 2,043   | 1.1                    |
| Nevada.....               | 385   | 12.2                   | Missouri.....     | 14,341  | 5.5                    | United States.....  | 452,809   | 7.0                    |
| Vermont.....              | 3,328   | 11.4                   | Wyoming.....      | 717   | 4.6                    |                     |   |                        |
| New Hampshire.....        | 2,322   | 11.3                   | Virginia.....     | 7,874   | 4.2                    |                     |   |                        |
|                           |   |                        | Delaware.....     | 397   | 3.9                    |                     |   |                        |

TABLE 418.—Number of farms reporting telephones, census of 1920.

[States arranged in order of percentage.]

| State.             | Number of farms reporting telephones. | Per cent of all farms. | State.                    | Number of farms reporting telephones. | Per cent of all farms. | State.              | Number of farms reporting telephones. | Per cent of all farms. |
|--------------------|---------------------------------------|------------------------|---------------------------|---------------------------------------|------------------------|---------------------|---------------------------------------|------------------------|
| Iowa.....          | 166,852                               | 86.1                   | New York.....             | 91,972                                | 47.6                   | Maryland.....       | 11,735                                | 24.5                   |
| Kansas.....        | 128,753                               | 77.9                   | North Dakota.....         | 36,349                                | 46.8                   | Utah.....           | 6,296                                 | 24.5                   |
| Nebraska.....      | 95,060                                | 78.4                   | Pennsylvania.....         | 87,887                                | 43.5                   | Arkansas.....       | 52,969                                | 22.7                   |
| Illinois.....      | 173,047                               | 73.2                   | West Virginia.....        | 37,739                                | 43.3                   | Tennessee.....      | 56,830                                | 22.5                   |
| Indiana.....       | 136,140                               | 66.4                   | Washington.....           | 27,952                                | 42.2                   | Virginia.....       | 32,482                                | 18.0                   |
| Missouri.....      | 108,543                               | 62.2                   | Rhode Island.....         | 1,685                                 | 41.3                   | Alabama.....        | 44,610                                | 17.4                   |
| Ohio.....          | 159,479                               | 62.1                   | Colorado.....             | 23,685                                | 39.5                   | Montana.....        | 9,781                                 | 17.0                   |
| Minnesota.....     | 110,568                               | 62.0                   | Oklahoma.....             | 71,613                                | 37.3                   | Arizona.....        | 1,638                                 | 16.4                   |
| South Dakota.....  | 44,327                                | 59.4                   | Nevada.....               | 1,122                                 | 35.5                   | North Carolina..... | 33,218                                | 12.3                   |
| Wisconsin.....     | 111,798                               | 59.1                   | Idaho.....                | 13,837                                | 32.9                   | New Mexico.....     | 3,359                                 | 11.3                   |
| Vermont.....       | 16,752                                | 57.6                   | District of Columbia..... | 67                                    | 32.8                   | Mississippi.....    | 28,260                                | 10.4                   |
| Connecticut.....   | 11,738                                | 51.8                   | Texas.....                | 140,234                               | 32.2                   | Georgia.....        | 31,231                                | 10.1                   |
| Massachusetts..... | 16,537                                | 51.7                   | New Jersey.....           | 9,494                                 | 31.9                   | Florida.....        | 4,524                                 | 8.4                    |
| Oregon.....        | 25,351                                | 50.5                   | California.....           | 37,309                                | 31.7                   | Louisiana.....      | 8,599                                 | 6.4                    |
| Michigan.....      | 97,874                                | 49.8                   | Wyoming.....              | 4,449                                 | 28.3                   | South Carolina..... | 10,943                                | 5.7                    |
| New Hampshire..... | 10,166                                | 49.5                   | Delaware.....             | 2,783                                 | 27.3                   | United States.....  | 2,508,002                             | 38.9                   |
| Maine.....         | 28,632                                | 49.0                   | Kentucky.....             | 73,145                                | 27.0                   |                     |                                       |                        |

## AUTOMOBILES, MOTOR TRUCKS, AND TRACTORS.

TABLE 419.—*Number of farms reporting automobiles, motor trucks, and tractors, census 1920.*

[The reported number of each machine somewhat exceeds the number of farms reporting.]

| State.                    | Automobiles.               |                        | Motor trucks.              |                        | Tractors.                  |                        |
|---------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|
|                           | Number of farms reporting. | Per cent of all farms. | Number of farms reporting. | Per cent of all farms. | Number of farms reporting. | Per cent of all farms. |
| Maine.....                | 11,686                     | 24.2                   | 1,061                      | 2.2                    | 605                        | 1.3                    |
| New Hampshire.....        | 4,797                      | 23.4                   | 663                        | 3.2                    | 196                        | 1.0                    |
| Vermont.....              | 7,611                      | 26.2                   | 576                        | 2.0                    | 428                        | 1.5                    |
| Massachusetts.....        | 8,181                      | 25.0                   | 3,136                      | 9.8                    | 540                        | 1.7                    |
| Rhode Island.....         | 1,198                      | 29.3                   | 471                        | 11.5                   | 69                         | 1.7                    |
| Connecticut.....          | 6,796                      | 30.0                   | 1,377                      | 6.1                    | 411                        | 1.8                    |
| New York.....             | 68,008                     | 35.2                   | 8,638                      | 4.5                    | 7,021                      | 3.6                    |
| New Jersey.....           | 11,731                     | 39.5                   | 3,075                      | 10.4                   | 845                        | 2.8                    |
| Pennsylvania.....         | 69,865                     | 34.5                   | 8,701                      | 4.3                    | 5,374                      | 2.7                    |
| Delaware.....             | 3,693                      | 36.4                   | 233                        | 2.8                    | 220                        | 2.2                    |
| Maryland.....             | 16,045                     | 33.5                   | 2,558                      | 5.3                    | 1,410                      | 2.9                    |
| District of Columbia..... | 50                         | 24.5                   | 29                         | 14.2                   | 1                          | .5                     |
| Virginia.....             | 28,557                     | 15.3                   | 2,389                      | 1.3                    | 2,200                      | 1.2                    |
| West Virginia.....        | 16,455                     | 11.9                   | 888                        | 1.0                    | 541                        | .6                     |
| North Carolina.....       | 41,839                     | 15.5                   | 2,551                      | 1.0                    | 2,184                      | .8                     |
| South Carolina.....       | 30,709                     | 15.9                   | 1,609                      | .8                     | 1,218                      | .6                     |
| Georgia.....              | 47,173                     | 15.2                   | 2,913                      | .9                     | 2,083                      | .7                     |
| Florida.....              | 8,761                      | 16.2                   | 1,500                      | 2.8                    | 609                        | 1.1                    |
| Ohio.....                 | 119,511                    | 46.8                   | 6,960                      | 2.7                    | 9,984                      | 3.9                    |
| Indiana.....              | 95,233                     | 46.4                   | 3,561                      | 1.7                    | 8,871                      | 4.3                    |
| Illinois.....             | 125,536                    | 53.0                   | 5,907                      | 2.5                    | 21,932                     | 9.3                    |
| Michigan.....             | 78,919                     | 40.2                   | 4,681                      | 2.4                    | 5,584                      | 2.8                    |
| Wisconsin.....            | 93,798                     | 49.6                   | 3,893                      | 2.1                    | 9,092                      | 4.8                    |
| Minnesota.....            | 106,847                    | 57.1                   | 3,677                      | 2.1                    | 14,794                     | 8.3                    |
| Iowa.....                 | 158,081                    | 73.1                   | 8,669                      | 4.1                    | 19,427                     | 9.1                    |
| Missouri.....             | 81,392                     | 31.0                   | 4,878                      | 1.9                    | 7,438                      | 2.8                    |
| North Dakota.....         | 44,010                     | 56.7                   | 743                        | 1.0                    | 11,834                     | 15.2                   |
| South Dakota.....         | 51,780                     | 69.4                   | 4,249                      | 5.7                    | 12,160                     | 16.3                   |
| Nebraska.....             | 94,004                     | 75.0                   | 6,333                      | 5.1                    | 10,942                     | 8.3                    |
| Kansas.....               | 102,517                    | 62.0                   | 3,782                      | 2.3                    | 16,128                     | 9.8                    |
| Kentucky.....             | 28,532                     | 10.5                   | 1,455                      | .5                     | 1,913                      | .7                     |
| Tennessee.....            | 22,446                     | 8.9                    | 1,362                      | .5                     | 1,796                      | .7                     |
| Alabama.....              | 15,906                     | 6.2                    | 1,114                      | .4                     | 739                        | .3                     |
| Mississippi.....          | 14,946                     | 5.5                    | 988                        | .3                     | 598                        | .2                     |
| Louisiana.....            | 9,494                      | 7.0                    | 798                        | .6                     | 2,142                      | 1.6                    |
| Texas.....                | 90,697                     | 22.9                   | 5,124                      | 1.2                    | 8,084                      | 1.9                    |
| Oklahoma.....             | 49,017                     | 25.5                   | 2,070                      | 1.1                    | 5,766                      | 3.0                    |
| Arkansas.....             | 15,401                     | 6.6                    | 973                        | .4                     | 1,423                      | .6                     |
| Montana.....              | 20,749                     | 36.0                   | 1,167                      | 2.0                    | 6,890                      | 12.0                   |
| Wyoming.....              | 6,180                      | 39.2                   | 564                        | 3.5                    | 969                        | 6.2                    |
| Colorado.....             | 23,355                     | 47.3                   | 2,884                      | 4.8                    | 4,526                      | 7.6                    |
| New Mexico.....           | 5,540                      | 18.6                   | 552                        | 1.9                    | 457                        | 1.5                    |
| Arizona.....              | 4,534                      | 45.5                   | 527                        | 5.3                    | 829                        | 8.2                    |
| Utah.....                 | 8,246                      | 32.1                   | 544                        | 2.1                    | 553                        | 2.2                    |
| Nevada.....               | 1,437                      | 45.4                   | 161                        | 5.1                    | 182                        | 5.8                    |
| Idaho.....                | 16,651                     | 39.6                   | 779                        | 1.9                    | 1,468                      | 3.5                    |
| Washington.....           | 27,626                     | 41.7                   | 3,172                      | 4.8                    | 2,474                      | 3.7                    |
| Oregon.....               | 20,561                     | 41.0                   | 1,728                      | 3.4                    | 2,902                      | 5.8                    |
| California.....           | 62,453                     | 53.1                   | 5,909                      | 5.0                    | 12,131                     | 10.8                   |
| United States.....        | 1,979,584                  | 30.7                   | 131,551                    | 2.0                    | 226,334                    | 3.6                    |

## RAILWAY FREIGHT TONNAGE.

TABLE 420.—Tonnage carried on railways in the United States, 1916-1921.<sup>1</sup>

| Product.   | Year ending June 30—<br>Class I and II roads,<br>1916. <sup>2</sup> | Year ending Dec. 31—        |                   |                   |                   |                   |                   |
|--|---|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|  |   | Class I roads. <sup>3</sup> |                   |                   |                   |                   |                   |
|  |   | 1916                        | 1917              | 1918              | 1919              | 1920              | 1921              |
| <b>FARM PRODUCTS.</b>  |   |                             |                   |                   |                   |                   |                   |
| Animal matter:   | 1,000 short tons.   | 1,000 short tons.           | 1,000 short tons. | 1,000 short tons. | 1,000 short tons. | 1,000 short tons. | 1,000 short tons. |
| Animals, live—   |   |                             |                   |                   |                   |                   |                   |
| Horses and mules.....  | 16,964  | 17,264                      | 17,906            | 17,257            | 19,395            | 936               | 430               |
| Cattle and calves.....   |   |                             |                   |                   |                   | 9,809             | 8,526             |
| Sheep and goats.....   |   |                             |                   |                   |                   | 1,344             | 1,176             |
| Hogs.....  |   |                             |                   |                   | 5,421             | 5,506             |                   |
| Packing-house products—  |   |                             |                   |                   |                   |                   |                   |
| Dressed meats.....   | 2,656   | 2,808                       | 2,966             | 3,714             | 3,398             | 2,770             | 2,579             |
| Hides and leather.....   | 1,401   | 1,396                       | 1,357             | 1,303             | 1,371             | 1,051             | 972               |
| Other packing-house products.....                                | 2,775   | 2,633                       | 2,567             | 3,510             | 3,736             | 2,206             | 2,095             |
| Total packing-house products.....                                | 6,832   | 6,837                       | 6,890             | 8,527             | 8,505             | 6,027             | 5,646             |
| Eggs <sup>4</sup> .....  |   |                             |                   |                   |                   | 536               | 551               |
| Butter and cheese <sup>5</sup> .....                             |   |                             |                   |                   |                   | 425               | 435               |
| Poultry (including game and fish).....                           | 1,016   | 1,097                       | 1,022             | 1,154             | 1,322             | 264               | 276               |
| Wool.....  | 503   | 505                         | 499               | 494               | 547               | 293               | 400               |
| Other animal matter.....   | 4,629   | 4,741                       | 5,541             | 6,338             | 5,724             | 1,540             | 1,327             |
| Total animal matter.....   | 29,945  | 30,473                      | 31,858            | 35,770            | 35,494            | 26,595            | 24,273            |
| Vegetable matter:  |   |                             |                   |                   |                   |                   |                   |
| Cotton.....  | 4,052   | 4,212                       | 3,552             | 3,550             | 3,903             | 3,379             | 3,186             |
| Fruit and vegetables.....  | 18,192  | 17,621                      | 17,679            | 18,736            | 19,726            | 10,045            | 9,204             |
| Potatoes <sup>6</sup> .....                                      |   |                             |                   |                   |                   | 4,118             | 4,639             |
| Grain and grain products—  |   |                             |                   |                   |                   |                   |                   |
| Grain—   |   |                             |                   |                   |                   |                   |                   |
| Wheat.....   | 57,686  | 55,685                      | 46,372            | 55,867            | 52,375            | 23,131            | 29,041            |
| Corn.....  |   |                             |                   |                   |                   | 12,689            | 17,219            |
| Oats.....  |   |                             |                   |                   |                   | 8,615             | 7,543             |
| Other grain.....   |   |                             |                   |                   |                   | 5,669             | 4,569             |
| Grain products—  |   |                             |                   |                   |                   |                   |                   |
| Flour.....   | 10,472  | 10,319                      | 10,065            | 10,588            | 11,670            | 10,952            | 10,554            |
| Other grain products.....  | 7,992   | 8,234                       | 8,413             | 8,630             | 9,079             | 8,891             | 7,881             |
| Total grain and grain products.....                              | 76,151  | 74,238                      | 64,850            | 75,084            | 73,128            | 69,947            | 76,807            |
| Hay.....   | 7,813   | 7,243                       | 8,314             | 8,239             | 7,483             | 7,967             | 8,163             |
| Sugar, sirup, glucose, and molasses.....                         | 3,917   | 3,762                       | 4,235             | 4,204             | 4,934             | 5,664             | 4,767             |
| Tobacco.....   | 1,086   | 1,016                       | 1,029             | 1,160             | 1,293             | 1,081             | 933               |
| Other vegetable matter.....                                      | 8,988   | 9,305                       | 9,204             | 9,257             | 9,604             | 15,250            | 15,166            |
| Total vegetable matter.....                                      | 119,699   | 117,398                     | 108,865           | 120,230           | 119,967           | 117,441           | 119,868           |
| Canned goods (food products) <sup>3</sup> .....                  |   |                             |                   |                   |                   | 3,074             | 2,026             |
| Total farm products.....   | 149,644   | 147,871                     | 140,723           | 156,000           | 155,461           | 147,110           | 146,767           |
| <b>OTHER FREIGHT.</b>  |   |                             |                   |                   |                   |                   |                   |
| Products of mines.....   | 706,029   | 680,123                     | 732,656           | 734,791           | 589,951           | 712,154           | 510,860           |
| Products of forests.....   | 106,857   | 93,819                      | 100,833           | 97,043            | 94,076            | 100,766           | 78,923            |
| Manufactures.....  | 182,916   | 185,025                     | 188,796           | 176,197           | 163,825           | 242,189           | 163,699           |
| All other (including all freight in less than carload lots)..... | 92,776  | 95,162                      | 101,006           | 99,032            | 92,799            | 53,202            | 42,080            |
| Total tonnage.....   | 1,238,223   | 1,202,000                   | 1,264,019         | 1,263,063         | 1,096,111         | 1,255,421         | 940,329           |

<sup>1</sup> Compiled from reports of the Interstate Commerce Commission. Original shipment only, excluding freight received by each railway from connecting railways and other carriers.<sup>2</sup> Roads having annual operating revenues in excess of \$1,000,000.<sup>3</sup> Not separately stated prior to 1920.

## CARLOAD WEIGHTS

TABLE 421.—Average weight per carload of freight originating on Class I railroads in the United States, during the three months ending June 30, 1920.

[Interstate Commerce Commission.]

| Commodity.                   | Tons. | Commodity.  | Tons. |
|------------------------------|-------|---|-------|
| Wheat.....                   | 39.4  | Hogs.....   | 9.7   |
| Corn.....                    | 36.2  | Poultry.....  | 11.5  |
| Oats.....                    | 30.0  | Eggs.....   | 11.6  |
| Flour and meal.....          | 30.9  | Butter and cheese.....                                | 13.2  |
| Hay, straw, and alfalfa..... | 12.2  | Wool.....   | 12.6  |
| Tobacco.....                 | 13.9  | Sugar, sirup, glucose, and molasses.....              | 23.0  |
| Cotton.....                  | 12.4  | Canned goods.....                                     | 24.3  |
| Citrus fruits.....           | 17.5  | Anthracite coal.....                                  | 43.0  |
| Potatoes.....                | 18.7  | Bituminous coal.....                                  | 50.1  |
| Horses and mules.....        | 11.4  | Textiles.....   | 12.8  |
| Cattle and calves.....       | 11.7  | Lumber, timber, box shooks, staves, and headings..... | 26.8  |
| Sheep and goats.....         | 10.3  |   |       |

## WAGON AND MOTOR-TRUCK HAULS.

TABLE 422.—Wagon and motor-truck hauls from farms to shipping points, 1906 and 1918.

| Item.                                   | Distance. | Round trips per day. | Load.              |          |         | Cost of hauling per ton per mile. |        |         |
|---|-----------|----------------------|--------------------|----------|---------|-----------------------------------|--------|---------|
|   |           |                      | corn. <sup>1</sup> | Wheat.   | Cotton. | Corn.                             | Wheat. | Cotton. |
| United States:                          | Miles.    | Number.              | Bushels.           | Bushels. | Bales.  | Cents.                            | Cents. | Cents.  |
| Motor trucks, 1918.....                 | 11.3      | 3.4                  | 58                 | 84       | 6.6     | 15                                | 15     | 18      |
| Wagons, 1918.....                       | 9.0       | 1.2                  | 39                 | 56       | 3.6     | 33                                | 30     | 48      |
| Wagons, 1906.....                       | 9.7       | 1.2                  | 39                 | 55       | 3.4     | 19                                | 19     | 27      |
| <i>Geographic Division.<sup>2</sup></i> |           |                      |                    |          |         |                                   |        |         |
| New England:                            |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 10.0      | 4.5                  | 62                 | 60       | .....   | 11                                | 14     | .....   |
| Wagons, 1918.....                       | 7.2       | 1.8                  | 38                 | 45       | .....   | 39                                | 38     | .....   |
| Wagons, 1906.....                       | 7.2       | 1.7                  | .....              | .....    | .....   | .....                             | .....  | .....   |
| Middle Atlantic:                        |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 12.2      | 3.4                  | 69                 | 78       | .....   | 14                                | 14     | .....   |
| Wagons, 1918.....                       | 7.6       | 1.6                  | 39                 | 47       | .....   | 39                                | 38     | .....   |
| Wagons, 1906.....                       | 6.5       | 1.7                  | 41                 | 48       | .....   | 24                                | 26     | .....   |
| South Atlantic:                         |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 9.8       | 4.0                  | 45                 | 57       | 6.0     | 19                                | 18     | 20      |
| Wagons, 1918.....                       | 8.4       | 1.4                  | 29                 | 36       | 3.5     | 41                                | 39     | 48      |
| Wagons, 1906.....                       | 9.9       | 1.2                  | 35                 | 42       | 3.1     | 28                                | 24     | 27      |
| North Central, east:                    |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 9.3       | 4.8                  | 64                 | 90       | .....   | 11                                | 9      | .....   |
| Wagons, 1918.....                       | 6.3       | 2.0                  | 41                 | 54       | .....   | 20                                | 26     | .....   |
| Wagons, 1906.....                       | 7.0       | 1.8                  | 40                 | 48       | .....   | 16                                | 18     | .....   |
| North Central, west:                    |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 10.1      | 3.8                  | 54                 | 84       | .....   | 18                                | 14     | .....   |
| Wagons, 1918.....                       | 7.9       | 1.5                  | 42                 | 57       | .....   | 33                                | 20     | .....   |
| Wagons, 1906.....                       | 8.7       | 1.4                  | 39                 | 52       | .....   | 17                                | 16     | .....   |
| South Central, east:                    |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 12.9      | 3.2                  | 58                 | 86       | 7.6     | 12                                | 10     | 13      |
| Wagons, 1918.....                       | 10.4      | 1.0                  | 26                 | 38       | 3.2     | 45                                | 30     | 52      |
| Wagons, 1906.....                       | 11.1      | 1.0                  | 29                 | 37       | 3.0     | 24                                | 23     | 31      |
| South Central, west:                    |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 13.0      | 2.9                  | 57                 | 72       | 6.7     | 17                                | 15     | 20      |
| Wagons, 1918.....                       | 10.9      | 1.0                  | 28                 | 46       | 3.8     | 49                                | 32     | 47      |
| Wagons, 1906.....                       | 12.6      | .9                   | 29                 | 38       | 3.8     | 22                                | 21     | 26      |
| Rocky Mountain:                         |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 21.0      | 1.2                  | 48                 | 70       | .....   | 36                                | 29     | .....   |
| Wagons, 1918.....                       | 20.2      | .4                   | 46                 | 66       | .....   | 52                                | 42     | .....   |
| Wagons, 1906.....                       | 16.8      | .7                   | 49                 | 60       | .....   | 16                                | 20     | .....   |
| Pacific:                                |           |                      |                    |          |         |                                   |        |         |
| Motor trucks, 1918.....                 | 12.3      | 2.9                  | 74                 | 105      | .....   | 20                                | 17     | .....   |
| Wagons, 1918.....                       | 11.2      | 1.4                  | 71                 | 67       | .....   | 23                                | 22     | .....   |
| Wagons, 1906.....                       | 11.5      | 1.1                  | 45                 | 76       | .....   | 28                                | 21     | .....   |

<sup>1</sup> Not shelled.<sup>2</sup> The geographic divisions are—New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; Middle Atlantic: New York, New Jersey, Pennsylvania; South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida; North Central east of the Mississippi River: Ohio, Indiana, Illinois, Michigan, Wisconsin; North Central west of the Mississippi River: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas; South Central east of the Mississippi River: Kentucky, Tennessee, Alabama, Mississippi; South Central west of the Mississippi River: Louisiana, Texas, Oklahoma, Arkansas; Rocky Mountain: Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho; Pacific: Washington, Oregon, California.

## NATIONAL FORESTS.

TABLE 423.—Area of National Forest lands, June 30, 1921.

[Reported by the Forest Service.]

| State.          | Net area.     | State.              | Net area.     | State.                      | Net area.     |
|-----------------|---------------|---------------------|---------------|-----------------------------|---------------|
|                 | <i>Acres.</i> |                     | <i>Acres.</i> |                             | <i>Acres.</i> |
| Alabama.....    | 65,167        | Michigan.....       | 89,466        | Porto Rico.....             | 12,443        |
| Alaska.....     | 20,570,336    | Minnesota.....      | 1,047,620     | South Carolina.....         | 18,454        |
| Arizona.....    | 11,355,346    | Montana.....        | 15,917,132    | South Dakota.....           | 1,076,754     |
| Arkansas.....   | 926,985       | Nebraska.....       | 205,944       | Tennessee.....              | 213,425       |
| California..... | 19,172,982    | Nevada.....         | 4,945,550     | Utah.....                   | 7,421,191     |
| Colorado.....   | 13,290,354    | New Hampshire.....  | 383,111       | Virginia.....               | 350,362       |
| Florida.....    | 317,511       | New Mexico.....     | 8,382,693     | Washington.....             | 9,939,712     |
| Georgia.....    | 134,095       | North Carolina..... | 313,075       | West Virginia.....          | 99,109        |
| Idaho.....      | 18,712,241    | Oklahoma.....       | 61,480        | Wyoming.....                | 3,468,793     |
| Maine.....      | 32,143        | Oregon.....         | 13,133,081    | Total, 149 National Forests | 156,666,045   |

TABLE 424.—National Forests: Timber disposed of, quantity, price, and number of users, revenue under specified heads, and details of grazing privileges, years ended June 30, 1916 to 1921.

[Reported by the Forest Service.]

| Item.  | Year ending June 30— |            |            |           |           |
|--|----------------------|------------|------------|-----------|-----------|
|  | 1917                 | 1918       | 1919       | 1920      | 1921      |
| Free timber given:                                     |                      |            |            |           |           |
| Number of users.....                                   | 41,427               | 38,073     | 34,617     | 37,336    | .....     |
| Timber cut..... M ft.                                  | 113,073              | 98,376     | 90,798     | 88,060    | .....     |
| Value..... dollars..                                   | 149,802              | 128,866    | 113,117    | 113,060   | .....     |
| Timber sales:  |                      |            |            |           |           |
| Number.....  | 11,608               | 13,037     | 12,592     | 13,272    | 12,570    |
| Quantity..... M ft.                                    | 2,008,087            | 1,453,299  | 799,476    | 1,326,622 | 1,170,186 |
| Price per thousand board feet (average)..... dollars.. | 1.85                 | 2.23       | 2.30       | 2.30      | 2.74      |
| Grazing:   |                      |            |            |           |           |
| Number of permits.....                                 | 36,638               | 39,113     | 30,152     | 37,500    | 38,153    |
| Kinds of stock—  |                      |            |            |           |           |
| Cattle..... number..                                   | 1,953,198            | 2,137,854  | 2,135,527  | 2,033,900 | 2,056,644 |
| Hogs..... do.....                                      | 49,939               | 57,963     | 60,789     | 53,435    | 43,190    |
| Horses..... do.....                                    | 2,308                | 2,371      | 5,154      | 4,540     | 3,177     |
| Horas..... do.....                                     | 96,680               | 102,156    | 93,251     | 86,615    | 76,091    |
| Sheep..... do.....                                     | 7,586,084            | 8,454,240  | 7,635,174  | 7,271,136 | 7,412,412 |
| Total..... do.....                                     | 9,690,357            | 10,755,689 | 10,229,895 | 9,445,702 | 9,594,514 |
| Special use and water-power permits, number..          | 6,056                | 5,819      | 5,191      | 6,026     | .....     |
| Revenue from—  |                      |            |            |           |           |
| Timber sales..... dollars..                            | 1,596,873            | 1,519,867  | 1,503,367  | 1,999,668 | 1,694,737 |
| Timber settlements..... do.....                        | 17,102               | 99,502     | 8,939      | 11,585    | 15,232    |
| Timber trespass..... do.....                           | 18,870               | 2,830      | 8,623      | 13,787    | 50,367    |
| Turpentine sales..... do.....                          | 8,156                | 8,394      | 13,220     | 19,310    | 8,978     |
| Turpentine trespass..... do.....                       | .....                | .....      | 692        | .....     | 679       |
| Fire trespass..... do.....                             | 52,514               | 3,613      | 5,259      | 28,796    | 5,958     |
| Occupancy trespass..... do.....                        | .....                | 1,207      | 889        | 943       | 539       |
| Special uses..... do.....                              | 108,329              | 119,979    | 136,134    | 146,265   | 158,346   |
| Grazing fees..... do.....                              | 1,544,714            | 1,702,585  | 2,556,962  | 2,427,023 | 439,988   |
| Grazing trespass..... do.....                          | 5,081                | 23,532     | 52,208     | 59,012    | 45,091    |
| Water power..... do.....                               | 106,389              | 93,976     | 72,322     | 89,838    | 85,070    |
| Total revenue..... do.....                             | 3,457,028            | 3,574,930  | 4,358,415  | 4,793,482 | 2,504,985 |

1 Includes timber taken in the exercise of permits for rights of way, development of power, etc.

2 Includes \$226 from sale of live stock.

3 Includes \$30 property trespass.

## COLD STORAGE SPACE.

TABLE 425.—Total refrigerated space of packing houses and cold storages reporting to the Bureau of Markets and Crop Estimates October 1, 1921.

[Thousands of cubic feet, i. e., 000 omitted.]

| States.                                       | Concerns. | Cubic feet of space held at temperatures of— |                        |                        |                | Total space. |
|---|-----------|--|------------------------|------------------------|----------------|--------------|
|   |           | 10° and below.                               | 11° to 29°, inclusive. | 30° to 44°, inclusive. | 45° and above. |              |
| Alabama.....                                  | 6         | 11   | 119                    | 954                    | 25             | 1,109        |
| California.....                               | 63        | 894  | 1,870                  | 12,276                 | 153            | 15,193       |
| Colorado.....                                 | 18        | 437  | 710                    | 3,906                  | 498            | 5,551        |
| Connecticut.....                              | 6         | 250  | 318                    | 913                    | .....          | 1,481        |
| District of Columbia.....                     | 3         | 150  | 150                    | 1,802                  | .....          | 2,102        |
| Georgia.....                                  | 17        | 55   | 852                    | 2,004                  | 13             | 2,424        |
| Illinois.....                                 | 94        | 24,277                                       | 13,528                 | 81,001                 | 8,825          | 127,626      |
| Indiana.....                                  | 45        | 512  | 857                    | 11,429                 | 605            | 13,493       |
| Iowa.....                                     | 43        | 1,192  | 2,488                  | 17,384                 | 1,482          | 22,546       |
| Kansas.....                                   | 34        | 1,572  | 3,501                  | 30,179                 | 4,806          | 40,058       |
| Kentucky.....                                 | 17        | 382  | 184                    | 3,629                  | 349            | 4,524        |
| Louisiana.....                                | 7         | 100  | 7                      | 1,667                  | 30             | 1,804        |
| Maine.....                                    | 11        | 473  | 422                    | 847                    | 3              | 1,745        |
| Maryland.....                                 | 21        | 408  | 183                    | 3,355                  | 586            | 4,532        |
| Massachusetts.....                            | 48        | 7,691  | 2,146                  | 14,131                 | 719            | 24,687       |
| Michigan.....                                 | 28        | 574  | 569                    | 4,771                  | 289            | 6,203        |
| Minnesota.....                                | 23        | 2,284  | 2,309                  | 12,084                 | 1,639          | 18,296       |
| Missouri.....                                 | 51        | 1,986  | 2,103                  | 22,024                 | 616            | 26,729       |
| Nebraska.....                                 | 25        | 3,211  | 805                    | 20,368                 | 2,126          | 26,508       |
| New Jersey.....                               | 33        | 3,380  | 1,440                  | 8,051                  | 362            | 13,213       |
| New York.....                                 | 171       | 9,554  | 8,228                  | 48,226                 | 1,642          | 67,650       |
| Ohio.....                                     | 92        | 1,932  | 1,246                  | 16,833                 | 435            | 20,529       |
| Oklahoma.....                                 | 13        | 439  | 1,649                  | 4,800                  | 1,020          | 7,908        |
| Oregon.....                                   | 23        | 244  | 824                    | 2,197                  | 180            | 3,445        |
| Pennsylvania.....                             | 102       | 1,790  | 2,037                  | 15,264                 | 425            | 19,516       |
| Rhode Island.....                             | 5         | 530  | 250                    | 768                    | 154            | 1,702        |
| South Dakota.....                             | 8         | 86   | 127                    | 1,424                  | 53             | 1,690        |
| Tennessee.....                                | 15        | 390  | 47                     | 3,298                  | 5              | 3,740        |
| Texas.....                                    | 45        | 453  | 1,035                  | 9,190                  | 1,488          | 12,786       |
| Utah.....                                     | 6         | 113  | 55                     | 1,048                  | .....          | 1,216        |
| Virginia.....                                 | 28        | 271  | 835                    | 7,281                  | 170            | 8,557        |
| Washington.....                               | 46        | 856  | 2,270                  | 9,012                  | 1,701          | 13,839       |
| West Virginia.....                            | 14        | 7  | 6                      | 2,603                  | 2,136          | 4,752        |
| Wisconsin.....                                | 69        | 437  | 854                    | 10,175                 | 340            | 11,806       |
| All other States.....                         | 67        | 255  | 1,023                  | 3,082                  | 128            | 4,468        |
| Totals.....                                   | 1,302     | 67,246                                       | 55,192                 | 388,034                | 33,101         | 543,573      |
| Public cold storage.....                      | 341       | 42,073                                       | 20,968                 | 125,547                | 4,595          | 193,778      |
| Private cold storage.....                     | 279       | 2,187  | 4,469                  | 10,023                 | 957            | 17,656       |
| Combined public and private cold storage..... | 210       | 4,961  | 5,751                  | 27,600                 | 1,696          | 39,386       |
| Packing house.....                            | 437       | 15,415                                       | 18,173                 | 198,116                | 24,795         | 256,499      |
| Packing house doing public cold storage.....  | 26        | 2,020  | 5,816                  | 20,748                 | 1,658          | 30,242       |
| Total refrigerated space.....                 | 1,302     | 67,246                                       | 55,192                 | 388,034                | 33,101         | 543,573      |

## GRAIN STORAGE CAPACITY.

TABLE 426.—Grain storage capacity of the United States,<sup>1</sup> as shown by the analysis of the license reports of May 15, 1918.

[Capacity shown in thousands of bushels; i. e., 000 omitted.]

| State.                    | Country elevators. |                |                             |                       | Terminal elevators. |                | Mills.   |                    | Total capacity, elevators and mills. |
|---------------------------|--------------------|----------------|-----------------------------|-----------------------|---------------------|----------------|----------|--------------------|--------------------------------------|
|                           | Num-ber.           | Capa-city.     | Num-ber capacity not given. | Esti-mated capa-city. | Num-ber.            | Capa-city.     | Num-ber. | Storage capa-city. |                                      |
|                           |                    | 1,000 bushels. |                             | 1,000 bushels.        |                     | 1,000 bushels. |          | 1,000 bushels.     | 1,000 bushels.                       |
| Alabama.....              | 33                 | 426            | 12                          | 670                   | 2                   | 250            | 29       | 147                | 1,493                                |
| Arizona.....              | 7                  | 125            | 2                           | 175                   |                     |                | 6        | 450                | 750                                  |
| Arkansas.....             | 26                 | 693            | 4                           | 508                   | 8                   | 699            | 95       | 603                | 2,583                                |
| California.....           | 328                | 8,849          | 128                         | 22,268                | 12                  |                | 71       | 3,703              | 34,880                               |
| Colorado.....             | 227                | 3,892          | 16                          | 4,187                 | 7                   | 385            | 70       | 3,787              | 12,261                               |
| Connecticut.....          | 30                 | 429            | 3                           | 477                   |                     |                | 4        |                    | 906                                  |
| Delaware.....             | 7                  | 23             | 2                           | 31                    |                     |                | 47       | 135                | 188                                  |
| District of Columbia..... |                    |                |                             |                       | 7                   | 110            |          |                    | 110                                  |
| Florida.....              | 15                 | 422            | 1                           | 452                   |                     |                |          |                    | 874                                  |
| Georgia.....              | 22                 | 278            | 4                           | 800                   |                     |                | 101      | 536                | 1,614                                |
| Idaho.....                | 303                | 9,904          | 68                          | 12,709                |                     |                | 63       | 3,603              | 26,276                               |
| Illinois.....             | 2,031              | 73,755         | 19                          | 74,716                | 31                  | 36,070         | 222      | 7,610              | 192,751                              |
| Indiana.....              | 885                | 23,641         | 21                          | 24,215                | 15                  | 3,296          | 363      | 6,576              | 57,728                               |
| Iowa.....                 | 1,668              | 36,830         | 40                          | 37,275                | 3                   | 405            | 121      | 2,419              | 76,929                               |
| Kansas.....               | 1,765              | 28,876         | 35                          | 29,460                | 5                   | 10,370         | 211      | 14,794             | 83,500                               |
| Kentucky.....             | 75                 | 2,259          | 7                           | 2,493                 | 9                   | 1,158          | 336      | 3,973              | 9,883                                |
| Louisiana.....            | 31                 | 13,553         | 3                           | 340                   | 8                   | 7,014          | 4        | 5                  | 21,612                               |
| Maine.....                | 35                 | 474            | 10                          | 609                   | 2                   | 2,500          | 11       | 39                 | 3,622                                |
| Maryland.....             | 82                 | 2,591          | 6                           | 2,801                 | 4                   | 6,000          | 159      | 783                | 12,175                               |
| Massachusetts.....        | 87                 | 2,806          | 9                           | 2,129                 | 3                   | 2,500          | 10       | 33                 | 6,968                                |
| Michigan.....             | 717                | 8,522          | 30                          | 8,572                 | 20                  | 11,802         | 314      | 3,376              | 32,572                               |
| Minnesota.....            | 1,576              | 43,694         | 25                          | 44,403                | 58                  | 78,134         | 245      | 18,299             | 184,630                              |
| Mississippi.....          | 19                 | 164            | 2                           | 180                   |                     |                | 4        | 5                  | 349                                  |
| Missouri.....             | 808                | 13,935         | 42                          | 11,918                | 21                  | 14,350         | 444      | 9,971              | 50,174                               |
| Montana.....              | 656                | 16,636         | 23                          | 17,240                |                     |                | 63       | 2,278              | 36,154                               |
| Nebraska.....             | 1,341              | 20,011         | 17                          | 28,734                | 17                  | 10,665         | 202      | 3,872              | 72,282                               |
| Nevada.....               | 3                  | 13             | 1                           | 20                    |                     |                | 12       | 183                | 216                                  |
| New Hampshire.....        | 13                 | 130            | 1                           | 140                   |                     |                | 3        | 47                 | 317                                  |
| New Jersey.....           | 66                 | 1,066          | 17                          | 1,435                 |                     |                | 48       | 158                | 2,059                                |
| New Mexico.....           | 24                 | 185            | 3                           | 211                   |                     |                | 37       | 236                | 632                                  |
| New York.....             | 308                | 15,991         | 35                          | 8,453                 | 26                  | 28,283         | 189      | 7,048              | 59,775                               |
| North Carolina.....       | 9                  | 80             | 1                           | 100                   |                     |                | 440      | 772                | 961                                  |
| North Dakota.....         | 1,907              | 32,336         | 6                           | 32,436                |                     |                | 82       | 2,037              | 66,806                               |
| Ohio.....                 | 978                | 18,416         | 32                          | 19,039                | 41                  | 7,620          | 529      | 13,229             | 58,304                               |
| Oklahoma.....             | 845                | 8,624          | 21                          | 8,843                 |                     |                | 101      | 4,007              | 21,564                               |
| Oregon.....               | 290                | 10,655         | 78                          | 14,769                | 11                  | 8,843          | 103      | 2,807              | 37,074                               |
| Pennsylvania.....         | 339                | 9,615          | 62                          | 8,544                 | 5                   | 4,390          | 682      | 4,040              | 20,498                               |
| Rhode Island.....         | 10                 | 313            | 1                           | 348                   |                     |                | 1        |                    | 661                                  |
| South Carolina.....       | 9                  | 310            | 4                           | 557                   |                     |                | 64       | 77                 | 944                                  |
| South Dakota.....         | 1,130              | 28,896         | 8                           | 29,102                | 5                   | 153            | 69       | 1,043              | 59,194                               |
| Tennessee.....            | 86                 | 6,784          | 4                           | 7,115                 | 16                  | 2,386          | 459      | 3,725              | 20,010                               |
| Texas.....                | 397                | 12,892         | 40                          | 14,336                | 6                   | 4,500          | 139      | 9,815              | 41,543                               |
| Utah.....                 | 46                 | 1,390          | 8                           | 1,682                 |                     |                | 74       | 1,741              | 4,813                                |
| Vermont.....              | 20                 | 380            | 7                           | 543                   |                     |                | 5        | 200                | 1,123                                |
| Virginia.....             | 44                 | 1,353          | 3                           | 337                   | 1                   | 950            | 484      | 1,652              | 4,292                                |
| Washington.....           | 583                | 14,025         | 41                          | 15,093                | 8                   | 4,089          | 72       | 6,941              | 40,148                               |
| West Virginia.....        | 19                 | 153            | 2                           | 170                   |                     |                | 207      | 919                | 1,242                                |
| Wisconsin.....            | 664                | 27,878         | 43                          | 29,811                |                     |                | 194      | 1,251              | 58,940                               |
| Wyoming.....              | 35                 | 396            | 6                           | 478                   |                     |                | 23       | 406                | 1,280                                |
| Total.....                | 20,589             | 513,067        | 953                         | 521,284               | 351                 | 248,122        | 7,212    | 149,580            | 1,432,083                            |

<sup>1</sup> Source: Compiled from Table 15 in "Grain and Flour Statistics During the War," United States Grain Corporation.

## FARM IMPLEMENTS AND EQUIPMENT.

TABLE 427.—Farm equipment manufactured in United States in 1920.

## GAS TRACTORS.

| Description.                                   | Number<br>manufactured. | Total<br>value ('000<br>omitted). | Number<br>sold in<br>United<br>States. | Number<br>sold for<br>export. |
|--|-------------------------|-----------------------------------|--|-------------------------------|
| <b>Size, belt horsepower (makers' rating):</b> |                         |                                   |  |                               |
| 15 and less.....                               | 11,044                  | \$4,571                           | 8,711                                  | 1,007                         |
| 16 to 22.....                                  | 147,746                 | 119,521                           | 119,371                                | 22,461                        |
| 23 to 32.....                                  | 37,934                  | 49,761                            | 29,553                                 | 4,968                         |
| 33 and over.....                               | 6,483                   | 19,720                            | 5,348                                  | 707                           |
| <b>Total.....</b>                              | <b>203,207</b>          | <b>193,563</b>                    | <b>162,983</b>                         | <b>29,143</b>                 |

## STEAM TRACTION ENGINES.

|                |       |         |       |     |
|----------------|-------|---------|-------|-----|
| All sizes..... | 1,766 | \$4,661 | 1,401 | 121 |
|----------------|-------|---------|-------|-----|

## PLOWS AND LISTERS.

|   |                |               |                |                |
|---|----------------|---------------|----------------|----------------|
| <b>Horse-drawn moldboard plows:</b>         |                |               |                |                |
| 1 horse.....                                | 370,979        | \$2,532       | 298,653        | 31,442         |
| Walking (2-horse and larger).....           | 346,331        | 5,707         | 302,425        | 77,808         |
| Sulky (1-bottom).....                       | 51,911         | 3,209         | 57,903         | 6,176          |
| Sulky (2-bottom).....                       | 48,601         | 4,590         | 40,074         | 15,547         |
| Sulky (3-bottom and larger).....            | 2,437          | 335           | 2,021          | 359            |
| <b>Total.....</b>                           | <b>820,259</b> | <b>16,373</b> | <b>701,076</b> | <b>181,327</b> |
| <b>Two-way moldboard plows:</b>             |                |               |                |                |
| Walking.....                                | 41,127         | 414           | 21,472         | 12,965         |
| Sulky.....                                  | 5,694          | 470           | 5,229          | 69             |
| <b>Total.....</b>                           | <b>46,821</b>  | <b>884</b>    | <b>26,701</b>  | <b>13,034</b>  |
| <b>Horse-drawn disk plows:</b>              |                |               |                |                |
| 1-disk.....                                 | 2,927          | 143           | 1,496          | 123            |
| 2-disk.....                                 | 11,112         | 911           | 9,485          | 969            |
| 3-disk and larger.....                      | 2,392          | 258           | 1,962          | 282            |
| <b>Total.....</b>                           | <b>16,431</b>  | <b>1,312</b>  | <b>12,943</b>  | <b>1,374</b>   |
| <b>Tractor moldboard plows:</b>             |                |               |                |                |
| 1-bottom.....                               | 4,569          | 405           | 3,297          | 600            |
| 2-bottom.....                               | 87,059         | 8,908         | 75,527         | 9,852          |
| 3-bottom.....                               | 44,509         | 7,211         | 38,059         | 9,172          |
| 4-bottom and larger.....                    | 7,405          | 1,771         | 5,148          | 1,103          |
| <b>Total.....</b>                           | <b>143,542</b> | <b>18,295</b> | <b>122,023</b> | <b>20,287</b>  |
| <b>Tractor disk plows:</b>                  |                |               |                |                |
| 2-disk.....                                 | 12,327         | 1,626         | 10,116         | 1,299          |
| 3-disk.....                                 | 8,982          | 1,394         | 6,972          | 1,139          |
| 4-disk and larger.....                      | 7,007          | 1,319         | 5,539          | 712            |
| <b>Total.....</b>                           | <b>28,316</b>  | <b>4,339</b>  | <b>22,627</b>  | <b>3,150</b>   |
| <b>Horse-drawn listers:</b>                 |                |               |                |                |
| 1-bottom.....                               | 35,551         | 869           | 37,190         | 359            |
| 2-bottom.....                               | 3,232          | 343           | 2,501          | .....          |
| <b>Total.....</b>                           | <b>38,783</b>  | <b>1,212</b>  | <b>39,691</b>  | <b>359</b>     |
| <b>Tractor-drawn listers, 2-bottom.....</b> | <b>8,305</b>   | <b>314</b>    | <b>2,219</b>   | <b>.....</b>   |
| <b>Plow stocks.....</b>                     | <b>264,121</b> | <b>493</b>    | <b>288,694</b> | <b>1,576</b>   |
| <b>Total.....</b>                           | <b>.....</b>   | <b>43,222</b> | <b>.....</b>   | <b>.....</b>   |



## FARM IMPLEMENTS AND EQUIPMENT—Continued.

TABLE 427.—Farm equipment manufactured in United States in 1920—Continued.

## TILLAGE IMPLEMENTS.

| Description.   | Number<br>manufactured. | Total<br>value (000<br>omitted). | Number<br>sold in<br>United<br>States. | Number<br>sold for<br>export. |
|--|-------------------------|----------------------------------|--|-------------------------------|
| <b>Harrows:</b>  |                         |                                  |  |                               |
| 1-horse spike and spring-tooth.....                    | 68,782                  | \$447                            | 69,500                                 | 2,138                         |
| Spike-tooth harrow, 2-horse and larger, complete....   | 87,121                  | 1,653                            | 80,878                                 | 4,582                         |
| Spike-tooth harrow, sections <sup>1</sup> .....        | 189,529                 | 1,796                            | 189,425                                | 13,961                        |
| Spring-tooth harrows, 2-horse and larger, complete.... | 24,610                  | 523                              | 25,008                                 | 766                           |
| Spring-tooth harrow, sections <sup>1</sup> .....       | 92,601                  | 1,473                            | 48,416                                 | 27,224                        |
| Horse-drawn disk.....                                  | 164,586                 | 7,159                            | 151,198                                | 11,894                        |
| Tractor-drawn disk.....                                | 67,095                  | 6,820                            | 59,715                                 | 3,589                         |
| Other harrows.....                                     | 12,860                  | 218                              | 11,925                                 | 28                            |
| Weeders.....   | 6,922                   | 95                               | 7,234                                  | .....                         |
| Smooth land rollers.....                               | 1,715                   | 66                               | 1,779                                  | .....                         |
| Soil pulverizers, corrugated rollers and packers.....  | 81,085                  | 1,962                            | 80,801                                 | 927                           |
| Other tillage machines.....                            | 11,110                  | 707                              | 10,415                                 | 431                           |
| <b>Total.....</b>                                      |                         | <b>22,919</b>                    |  |                               |

<sup>1</sup> Not reported by manufacturer as complete harrows.

## PLANTING MACHINERY.

|  |                |               |                |               |
|--|----------------|---------------|----------------|---------------|
| <b>Corn planters:</b>                        |                |               |                |               |
| Hand.....                                    | 33,790         | \$53          | 34,583         | 365           |
| 1-row.....                                   | 31,602         | 521           | 31,127         | 531           |
| 2-row.....                                   | 50,627         | 3,474         | 66,475         | 1,207         |
| <b>Total.....</b>                            | <b>125,009</b> | <b>4,048</b>  | <b>132,185</b> | <b>2,163</b>  |
| <b>Cotton planters, 1-row.....</b>           | <b>35,056</b>  | <b>393</b>    | <b>37,917</b>  | <b>.....</b>  |
| <b>Combination corn and cotton planters:</b> |                |               |                |               |
| 1-row.....                                   | 90,732         | 1,647         | 97,908         | 1,436         |
| 2-row.....                                   | 2,554          | 174           | 3,773          | 1,246         |
| <b>Total.....</b>                            | <b>93,586</b>  | <b>1,821</b>  | <b>101,681</b> | <b>2,682</b>  |
| <b>Combined listers and drills:</b>          |                |               |                |               |
| 1-row.....                                   | 7,607          | 473           | 11,855         | .....         |
| 2-row.....                                   | 1,332          | 189           | 1,312          | 29            |
| <b>Total.....</b>                            | <b>8,939</b>   | <b>662</b>    | <b>13,170</b>  | <b>29</b>     |
| <b>Potato planters, horsedrawn.....</b>      | <b>8,471</b>   | <b>667</b>    | <b>9,367</b>   | <b>107</b>    |
| <b>Grain drills:</b>                         |                |               |                |               |
| Horse.....                                   | 100,637        | 10,973        | 107,182        | 9,734         |
| Tractor.....                                 | 3,406          | 431           | 8,168          | 103           |
| <b>Total.....</b>                            | <b>104,043</b> | <b>11,404</b> | <b>110,850</b> | <b>9,897</b>  |
| <b>Broadcast seeders:</b>                    |                |               |                |               |
| Wheel (horse-drawn).....                     | 6,783          | 357           | 6,163          | 636           |
| End-gate.....                                | 14,961         | 246           | 14,923         | .....         |
| Hand (wheelbarrow and other).....            | 60,230         | 73            | 68,280         | 1,080         |
| <b>Total.....</b>                            | <b>90,983</b>  | <b>681</b>    | <b>89,371</b>  | <b>1,716</b>  |
| <b>Beet drills, horse-drawn.....</b>         | <b>1,357</b>   | <b>103</b>    | <b>1,586</b>   | <b>8</b>      |
| <b>Transplanters, horse-drawn.....</b>       | <b>4,804</b>   | <b>318</b>    | <b>4,426</b>   | <b>230</b>    |
| <b>Total planting machinery.....</b>         | <b>472,248</b> | <b>20,097</b> | <b>498,853</b> | <b>16,822</b> |

## CULTIVATING MACHINERY.

|   |                |               |                |               |
|---|----------------|---------------|----------------|---------------|
| <b>Cultivator (row crops):</b>            |                |               |                |               |
| Motor.....                                | 1,120          | \$911         | 665            | 20            |
| <b>Horse-drawn (straddle row):</b>        |                |               |                |               |
| 1-row walking.....                        | 57,379         | 1,793         | 62,329         | 765           |
| 1-row riding.....                         | 121,637        | 5,645         | 152,644        | 787           |
| 2-row.....                                | 74,827         | 4,272         | 90,427         | 2,444         |
| 1-horse, including shovel plows, etc..... | 316,312        | 1,950         | 273,576        | 40,785        |
| Beet cultivators.....                     | 4,430          | 283           | 5,336          | 157           |
| Other cultivators (horse-drawn).....      | 4,474          | 382           | 4,653          | 905           |
| <b>Total.....</b>                         | <b>530,179</b> | <b>15,186</b> | <b>589,830</b> | <b>45,883</b> |

## FARM IMPLEMENTS AND EQUIPMENT—Continued.

TABLE 427.—Farm equipment manufactured in United States in 1920—Continued.

## HAYING MACHINERY.

| Description.                           | Number manufactured. | Total value (000 omitted). | Number sold in United States. | Number sold for export. |
|--|----------------------|----------------------------|-------------------------------|-------------------------|
| Mowers.....                            | 239,165              | \$15,393                   | 172,654                       | 68,229                  |
| Sulky rakes.....                       | 84,495               | 3,107                      | 77,622                        | 19,095                  |
| Side-delivery rakes.....               | 15,193               | 1,127                      | 16,658                        | 414                     |
| Sweep rakes.....                       | 22,684               | 819                        | 24,073                        | 885                     |
| Tedders.....                           | 5,992                | 347                        | 4,803                         | 1,981                   |
| Loaders.....                           | 33,337               | 3,050                      | 32,399                        | 2,509                   |
| Stackers.....                          | 10,139               | 825                        | 9,628                         | 318                     |
| Combined sweep rakes and stackers..... | 279                  | 35                         | 270                           | .....                   |
| Total.....                             | 411,556              | 24,703                     | 338,112                       | 94,011                  |

## HARVESTING MACHINERY.

|  |         |          |         |        |
|--|---------|----------|---------|--------|
| Grain binders.....                     | 139,372 | \$24,593 | 99,546  | 25,122 |
| Grain headers.....                     | 4,725   | 1,295    | 3,071   | 945    |
| Combined harvesters and threshers..... | 3,627   | 4,253    | 2,717   | 929    |
| Rice binders.....                      | 2,135   | 446      | 3,662   | 42     |
| Corn binders (row).....                | 40,793  | 6,090    | 32,559  | 833    |
| Self-rake reapers.....                 | 14,919  | 1,170    | 1,703   | 12,377 |
| Corn-pickers and huskers (field).....  | 2,882   | 1,068    | 2,939   | .....  |
| Potato diggers (elevator type).....    | 11,718  | 1,090    | 10,463  | 657    |
| Potato diggers (plow type).....        | 6,482   | 93       | 6,781   | 223    |
| Bean harvesters.....                   | 498     | 31       | 490     | .....  |
| Beet lifters.....                      | 5,026   | 236      | 4,893   | 201    |
| Total.....                             | 232,177 | 41,015   | 168,829 | 41,334 |

## MACHINES FOR PREPARING CROPS FOR MARKET OR USE.

|                                 |         |          |         |       |
|---------------------------------|---------|----------|---------|-------|
| Grain threshers.....            | 22,159  | \$19,059 | 20,753  | 1,96  |
| Rice threshers.....             | 510     | 501      | 598     | ..... |
| Pea and bean threshers.....     | 216     | 156      | 211     | ..... |
| Clover hullers.....             | 690     | 910      | 767     | 10    |
| Ensilage cutters.....           | 27,004  | 4,852    | 23,896  | 1,08  |
| Corn shellers (power):          |         |          |         |       |
| Spring.....                     | 6,379   | 1,133    | 5,549   | 12    |
| Cylinder.....                   | 850     | 511      | 957     | 2     |
| Corn huskers and shredders..... | 4,933   | 2,116    | 5,101   | 2     |
| Hay presses:                    |         |          |         |       |
| Horse.....                      | 2,225   | 781      | 2,795   | 483   |
| Engine.....                     | 5,247   | 2,639    | 4,251   | 32    |
| Feed grinders and crushers:     |         |          |         |       |
| Hand.....                       | 44,797  | 226      | 23,535  | 20,34 |
| Power.....                      | 61,977  | 2,244    | 52,314  | 4,57  |
| Grain cleaners and graders..... | 19,765  | 584      | 19,193  | 1,16  |
| Total.....                      | 196,772 | 35,612   | 159,918 | 30,22 |

<sup>1</sup> Not including seed-corn graders.

## HORSE-DRAWN VEHICLES.

|  |         |         |         |       |
|--|---------|---------|---------|-------|
| Farm wagons:                                   |         |         |         |       |
| 1-horse.....                                   | 32,934  | \$2,076 | 31,165  | 122   |
| Light 2-horse, 3,500 pounds loaded.....        | 49,498  | 5,413   | 46,571  | 32    |
| Medium 2-horse, 4,500 pounds loaded.....       | 72,399  | 8,325   | 68,439  | 43    |
| Standard 2-horse, 6,500 pounds loaded.....     | 50,926  | 6,457   | 48,380  | 67    |
| Heavy 2-horse, 7,500 pounds loaded.....        | 9,666   | 1,384   | 9,217   | 213   |
| Sizes not specified.....                       | 11,800  | 1,149   | 11,800  | ..... |
| Horse-drawn farm trucks with wood wheels.....  | 47,233  | 3,280   | 44,737  | 725   |
| Horse-drawn farm trucks with metal wheels..... | 39,856  | 1,617   | 34,607  | 471   |
| Light spring vehicles.....                     | 5,652   | 477     | 3,409   | 2,171 |
| Buggies.....                                   | 132,246 | 12,254  | 132,014 | ..... |
| Total.....                                     | 449,095 | 42,423  | 430,459 | 3,810 |

## FARM IMPLEMENTS AND EQUIPMENT—Continued.

TABLE 427.—Farm equipment manufactured in United States in 1920—Continued.

## MISCELLANEOUS ITEMS.

| Description.   | Number<br>manufactured. | Total<br>value (000<br>omitted). | Number<br>sold in<br>United<br>States. | Number<br>sold for<br>export. |
|--|-------------------------|----------------------------------|--|-------------------------------|
| Cane mills.....  | 11,923                  | \$780                            | 7,539                                  | 1,879                         |
| Cream separators, centrifugal.....   | 222,587                 | 15,501                           | 169,057                                | 27,954                        |
| Farm elevators:  |                         |                                  |  |                               |
| Portable.....  | 7,703                   | 1,776                            | 7,423                                  | 69                            |
| Stationary.....  | 3,052                   | 924                              | 2,910                                  | 8                             |
| Feed and litter carriers.....  | 15,093                  | 682                              | 14,274                                 | 75                            |
| Fertilizer distributors (horse-drawn).....                                   | 48,540                  | 453                              | 51,236                                 | .....                         |
| Gasoline and kerosene engines (stationary and portable)<br>for farm use..... | 268,287                 | 25,693                           | 216,144                                | 22,059                        |
| Lime spreaders.....  | 9,153                   | 325                              | 9,093                                  | 83                            |
| Manure spreaders.....  | 103,036                 | 14,744                           | 104,444                                | 1,120                         |
| Milking machines.....  | 29,555                  | 2,962                            | 28,130                                 | 921                           |
| Portable corn cribs.....   | 4,502                   | 731                              | 4,186                                  | .....                         |
| Portable grain bins.....   | 6,137                   | 1,206                            | 6,137                                  | .....                         |
| Pumps <sup>1</sup> .....   | 500,690                 | 5,087                            | 445,269                                | 27,177                        |
| Pump jacks.....  | 84,948                  | 877                              | 89,198                                 | 2,349                         |
| Seed-potato cutters.....   | 1,442                   | 14                               | 1,418                                  | .....                         |
| Silos <sup>1</sup> .....   | 24,052                  | 9,492                            | 23,637                                 | 24                            |
| Spraying machines (power or traction).....                                   | 11,000                  | 2,488                            | 10,715                                 | 228                           |
| Stalk cutters.....   | 24,064                  | 1,098                            | 22,455                                 | 43                            |
| Stump pullers:   |                         |                                  |  |                               |
| Hand.....  | 3,216                   | 310                              | 2,113                                  | 1,008                         |
| Horse or engine.....   | 1,646                   | 308                              | 775                                    | 241                           |
| Syrup evaporators.....   | 11,355                  | 275                              | 9,114                                  | 233                           |
| Wind mills.....  | 75,736                  | 5,443                            | 57,108                                 | 17,404                        |
| Wood sawing machines:  |                         |                                  |  |                               |
| Circular.....  | 29,084                  | 732                              | 29,195                                 | 36                            |
| Drag.....  | 11,482                  | 1,633                            | 10,427                                 | 13                            |
| Total.....   | 1,508,283               | 93,544                           | 1,318,997                              | 102,984                       |

<sup>1</sup> Not complete.

## RECAPITULATION OF MANUFACTURE AND SALE OF FARM EQUIPMENT IN 1920.

|   |           |           |           |         |
|---|-----------|-----------|-----------|---------|
| Tractors, gas.....                                  | 203,207   | \$193,563 | 162,988   | 29,143  |
| Steam traction engines.....                         | 1,766     | 4,661     | 1,401     | 121     |
| Plows and listers.....                              | 1,361,578 | 43,222    | 1,215,979 | 221,077 |
| Tillage implements.....                             | .....     | 22,919    | .....     | .....   |
| Planting machinery.....                             | 472,248   | 20,097    | 498,853   | 16,822  |
| Cultivating machinery.....                          | 580,179   | 15,186    | 589,830   | 45,863  |
| Haying machinery.....                               | 411,556   | 24,703    | 338,112   | 94,011  |
| Harvesting machinery.....                           | 232,177   | 41,015    | 168,829   | 41,334  |
| Machines for preparing crops for market or use..... | 196,772   | 35,612    | 159,918   | 30,220  |
| Horse-drawn vehicles.....                           | 449,085   | 42,423    | 430,459   | 3,810   |
| Miscellaneous items.....                            | .....     | 93,544    | .....     | .....   |
| Grand total.....                                    | 3,008,578 | 536,945   | 3,566,369 | 482,401 |

## VEGETABLE OILS.

TABLE 428.—Imports of vegetable oils into the United States, for calendar years specified.

[Source: Bureau of Foreign and Domestic Commerce.]

| Oils.                               | 1912            | 1914            | 1916            | 1917             | 1918            | 1919            | 1920            | 1921 <sup>1</sup> |
|-------------------------------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-------------------|
|                                     | 1000<br>pounds. | 1000<br>pounds. | 1000<br>pounds. | 1000<br>pounds.  | 1000<br>pounds. | 1000<br>pounds. | 1000<br>pounds. | 1000<br>pounds.   |
| Castor <sup>2</sup> .....           | 56              | 1,661           | 3,071           | 4,406            | 8,780           | 3,000           | 1,372           | 148               |
| Chinese nut.....                    | 42,787          | 30,137          | 57,649          | 41,091           | 42,718          | 53,553          | 67,962          | 27,249            |
| Cocoa butter or but-<br>terine..... | 4,749           | 1,244           | 558             | 1                | 3               | 1               | 72              | 2,373             |
| Cocunut.....                        | 46,720          | 58,012          | 64,349          | 163,091          | 356,089         | 281,063         | 216,327         | 189,717           |
| Cottonseed.....                     | 2,160           | 16,017          | 16,598          | 13,826           | 18,373          | 27,806          | 9,458           | 669               |
| Linseed.....                        | 2,134           | 4,350           | 711             | 583              | 196             | 16,143          | 35,200          | 60,021            |
| Olive <sup>3</sup> .....            | 49,154          | 56,466          | 61,769          | 55,531           | 1,286           | 69,799          | 31,087          | 58,881            |
| Palm.....                           | 52,771          | 49,092          | 29,270          | 34,257           | 20,993          | 41,818          | 41,948          | 22,155            |
| Palm kernel.....                    | 27,631          | 21,089          | 4,324           | ( <sup>4</sup> ) | 34              | 1,929           | 1,694           | 2,383             |
| Peanut.....                         | 7,626           | 7,365           | 15,674          | 27,405           | 68,466          | 154,052         | 95,124          | 3,021             |
| Peanut.....                         | 10,266          | 11,172          | 20,181          | 10,132           | 23,079          | 3,375           | 12,907          | 7,153             |
| Rapeseed.....                       | 24,959          | 12,555          | 145,409         | 264,926          | 335,984         | 195,808         | 112,214         | 17,283            |
| Soy bean.....                       |                 |                 |                 |                  |                 |                 |                 |                   |

<sup>1</sup> Preliminary.<sup>2</sup> Imports for consumption.<sup>3</sup> Includes oil for mechanical purposes.<sup>4</sup> Less than 1,000 pounds.

NOTE.—Conversions on basis of 7½ pounds to the gallon for all oils except castor; castor oil, 8 pounds to the gallon.

TABLE 429.—Domestic exports of vegetable oil from the United States, for specified calendar years.

[Source: Bureau of Foreign and Domestic Commerce.]

| Oils.                               | 1912             | 1914             | 1916             | 1917             | 1918             | 1919             | 1920             | 1921 <sup>1</sup> |
|-------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
|                                     | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds.  |
| Corn.....                           | 22,870           | 16,199           | 9,119            | 4,709            | 171              | 6,415            | 12,059           | 4,400             |
| Cottonseed.....                     | 355,930          | 216,309          | 188,214          | 124,704          | 119,067          | 193,133          | 184,754          | 252,592           |
| Linseed.....                        | 3,151            | 1,993            | 6,180            | 11,465           | 5,806            | 11,266           | 5,366            | 3,512             |
| Cocoa butter or but-<br>terine..... |                  |                  |                  |                  |                  | * 7,320          | 5,377            | 2,855             |
| Cocunut.....                        |                  |                  |                  |                  |                  | * 118,612        | 25,694           | 7,498             |
| Peanut.....                         |                  |                  |                  |                  |                  | * 4,342          | 1,425            | 1,708             |
| Soy bean.....                       |                  |                  |                  |                  |                  | * 27,715         | 43,512           | 1,944             |

<sup>1</sup> Preliminary.<sup>2</sup> Not separately stated prior to July 1, 1919.<sup>3</sup> July to December.

NOTE.—Conversions on basis of 7½ pounds to the gallon.

TABLE 430.—Production of vegetable oils in the United States, for calendar years specified.

[Sources: 1912-1918, Supplement to Bulletin 769, U. S. Dept. of Agriculture; 1919-1921, Animal and Vegetable Fats and Oils, Bureau of Census (Bulletin.)]

| Oils.             | 1912             | 1914             | 1916             | 1917             | 1918             | 1919             | 1920             | 1921 <sup>1</sup> |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
|                   | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds. | 1,000<br>pounds.  |
| Castor.....       | 23,359           | 20,423           | 22,766           | 22,902           | 14,184           | 24,637           | 24,187           | 20,595            |
| Cocunut.....      | 31,729           | 38,272           | 104,727          | 188,488          | 341,235          | 215,542          | 131,218          | 113,194           |
| Corn.....         | 72,832           | 91,810           | 109,963          | 118,021          | 111,065          | 97,400           | 98,619           | 87,481            |
| Cottonseed.....   | 1,435,401        | 1,789,777        | 1,492,430        | 1,343,849        | 1,283,823        | 1,429,948        | 1,142,671        | 1,277,080         |
| Linseed.....      | 461,656          | 507,422          | 531,588          | 482,169          | 375,452          | 452,928          | 485,272          | 482,918           |
| Mustard seed..... | 380              | 306              | 729              | 1,068            | 1,296            | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> )  |
| Olive.....        | 966              | 1,128            | 1,462            | 963              | 618              | 439              | 643              | 974               |
| Palm kernel.....  | 3,200            | 402              | 8,619            | 6,453            | 3,784            | 2,517            | 2,671            | 1,327             |
| Peanut.....       | 484              | 1,006            | 28,534           | 50,499           | 95,934           | 87,607           | 13,085           | 33,234            |
| Raisin seed.....  | 320              | 435              | 752              | 667              | 598              | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> )  |
| Rapeseed.....     | 90               | 19               | 223              | 232              | 139              | 1,237            | 409              | ( <sup>4</sup> )  |
| Sesame.....       |                  | 80               | 129              | 304              | 299              | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> )  |
| Sheanut.....      |                  |                  | 3,974            | 81               | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> )  |
| Soy bean.....     |                  | 2,764            | 9,920            | 42,074           | 79,861           | ( <sup>4</sup> ) | ( <sup>4</sup> ) | ( <sup>4</sup> )  |

<sup>1</sup> Preliminary.

Edible and inedible from 1912-1918. Crude 1919-1921.

<sup>3</sup> Crude oil only.<sup>4</sup> Data unavailable.

TABLE 431.—*International trade in cottonseed oil.*

(Conversions on the basis of 7.5 pounds to the gallon.)

| Countries.                           | 1913                  |                      | 1917           |                | 1918           |                | 1919           |                | 1920           |                |
|--------------------------------------|-----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                      | Imports.              | Exports.             | Imports.       | Exports.       | Imports.       | Exports.       | Imports.       | Exports.       | Imports.       | Exports.       |
| Belgium.....                         | Pounds.<br>15,085,415 | Pounds.<br>7,583,416 | Pounds.<br>(1) | Pounds.<br>(1) | Pounds.<br>(1) | Pounds.<br>(1) | Pounds.<br>(1) | Pounds.<br>(1) | Pounds.<br>(1) | Pounds.<br>(1) |
| Denmark.....                         | 8,911,875             | 4,260,848            | 14,274,564     | 109,559        | 3,563,498      | 42,108         | 9,456,301      | 2,369,667      | 3,108,517      | 1,192,525      |
| France.....                          | 19,534,299            | 2,035,725            | 14,274,564     | 109,559        | 3,563,498      | 42,108         | 10,381,241     | 89,288         | 6,598,368      | (1)            |
| Italy.....                           | 29,680,300            | 3,307                | 15,332,631     | 3,307          | 33,069         | 33,069         | 8,211,083      | 319,667        | 30,216,588     | 3,748          |
| Netherlands.....                     | 68,238,453            | 226,425              | 18,807,484     | 226,425        | 760,875        | 760,875        | 43,778,166     | 12,815,981     | 19,514,295     | 5,482,885      |
| Norway.....                          | 11,563,700            | 478,526              | 27,435,028     | 478,526        | (1)            | (1)            | 11,877,699     | 21,156,592     | 21,156,592     | (1)            |
| Rumania.....                         | 3,610,685             | 21,385               | (1)            | (1)            | (1)            | (1)            | 308,102        | (1)            | (1)            | (1)            |
| Sweden.....                          | 5,267,964             | 21,385               | 19,122,880     | 20,953         | 14,991         | 14,991         | 9,683,461      | (1)            | (1)            | (1)            |
| United Kingdom.....                  | 37,152,640            | 57,198,400           | 19,122,880     | 4,867,620      | 38,671,360     | 114,240        | 57,211,640     | 21,976,640     | 10,470,720     | 38,806,580     |
| Canada (year beginning April 1)..... | 27,262,644            | (1)                  | 36,253,441     | 4,867,620      | 43,691,922     | (1)            | 52,086,262     | (1)            | (1)            | (1)            |
| United States.....                   | 11,406,831            | 264,776,781          | 13,226,028     | 124,703,606    | 18,372,397     | 119,067,376    | 27,806,784     | 108,133,201    | 9,457,924      | 184,753,824    |
| Cuba.....                            | 4,140,270             | (1)                  | 9,428,963      | (1)            | 9,948,780      | (1)            | 2,294,078      | (1)            | (1)            | (1)            |
| Argentina.....                       | 43,641,058            | (1)                  | 4,719,857      | 4,611          | 2,650,566      | 4,584,468      | 1,504,886      | 16,601         | (1)            | (1)            |
| Brazil.....                          | 3,800,873             | 253,328              | 364,740        | 2,503,797      | 51,910         | 4,584,468      | 81,301         | 4,918,313      | (1)            | (1)            |
| Peru.....                            | (1)                   | 8,384,533            | (1)            | 4,741,579      | (1)            | 3,988,741      | (1)            | 3,761,101      | (1)            | (1)            |
| China.....                           | (1)                   | (1)                  | (1)            | 10,406,800     | (1)            | 17,769,600     | (1)            | 25,724,667     | (1)            | (1)            |
| Japan.....                           | (1)                   | (1)                  | (1)            | 1,612,800      | (1)            | 2,446,400      | (1)            | 3,081,067      | (1)            | (1)            |
| Australia (year ending June 30)..... | 41,303,747            | 1,133,008            | 1,133,008      | 831,907        | 831,907        | 831,907        | 1,073,903      | 443,588        | 286,992        | (1)            |
| Union of South Africa.....           | 4,085,816             | 1,639,759            | 1,639,759      | 32,714         | 32,714         | 32,714         | 293,670        | 225,449        | 225,449        | (1)            |
| Egypt.....                           | 884,318               | 4,642,087            | 4,642,087      | 4,863,352      | (1)            | (1)            | 39,868         | (1)            | (1)            | (1)            |

1 Data unavailable.

2 Commerce Reports.

3 Not separately stated.

4 Calendar year.

Norw.—Except as otherwise indicated, sources for the above data may be noted as follows:

Belgium: Bulletin Mensuel du Commerce Special de la Belgique avec les Pays Etrangers.

Denmark: Danmarks Vareindførsel og Udførsel. Also, Vareomsættningen med Udlandet (Denmark).

France: Tableau du Commerce et de la Navigation, Vol. I. Also, Documents Statistiques sur le Commerce de la France.

Italy: Movimento Commerciale del Regno d'Italia.

Netherlands: Statistiek van den In, uit- en Doorvoer Nederlanden. Also, Maandstatistiek.

Norway: Norges Handel.

Rumania: Bulletin Semestriel de la Statistique.

Sweden: Svenska Officiella Statistik-Handl.

United Kingdom: Accounts Relating to Trade and Navigation of the United Kingdom. Canada: Monthly Report of the Trade of Canada.

United States: Commerce and Navigation of the United States.

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Argentina: Anuario de la Direccion General de Estadistica.

Brazil: Commercio Exterior do Brasil.

Peru: Estadística del Comercio Exterior del Perú.

Japan: Annual Return of Foreign Trade—Japan.

Australia: Trade Customs and Excise Revenue of the Commonwealth of Australia.

Egypt: Monthly Summary of the Foreign Trade of Egypt (December).

China: Recueil de Trade and Trade Reports, Part I.

Union of South Africa: Annual Statement of the Trade and Shipping of the Union of South Africa.

TABLE 492.—*International trade in olive oil (including nonedible).*  
[Conversions on basis of 7.5 pounds to the gallon.]

| Countries.                           | 1913       |            | 1917        |            | 1918       |             | 1919        |            | 1920       |            |
|--------------------------------------|------------|------------|-------------|------------|------------|-------------|-------------|------------|------------|------------|
|                                      | Imports.   | Exports.   | Imports.    | Exports.   | Imports.   | Exports.    | Imports.    | Exports.   | Imports.   | Exports.   |
|                                      | Pounds.    | Pounds.    | Pounds.     | Pounds.    | Pounds.    | Pounds.     | Pounds.     | Pounds.    | Pounds.    | Pounds.    |
| Belgium.....                         | 4,445,283  | 940,535    | 25,853      | 3,307      | 3,307      | 5,810,287   | 5,810,287   | 233,305    | 233,305    | 233,305    |
| Denmark.....                         | 17,637     | 3,307      | 114,282     | 3,307      | 3,307      | 1,273,085   | 1,273,085   | 233,305    | 233,305    | 233,305    |
| Finland.....                         | 243,659    | 114,282    | 114,282     | 3,307      | 3,307      | 5,810,287   | 5,810,287   | 233,305    | 233,305    | 233,305    |
| France.....                          | 31,924,797 | 13,027,202 | 114,089,769 | 3,307      | 3,307      | 1,273,085   | 1,273,085   | 233,305    | 233,305    | 233,305    |
| Greece.....                          | 4,001,882  | 11,827,432 | 50,038      | 3,307      | 3,307      | 1,273,085   | 1,273,085   | 233,305    | 233,305    | 233,305    |
| Italy.....                           | 2,400,785  | 68,231,626 | 22,960,820  | 18,522,867 | 3,487,456  | 18,888,792  | 18,888,792  | 23,374,272 | 23,374,272 | 23,374,272 |
| Netherlands.....                     | 2,400,785  | 277,028    | 15,194      | 1,056      | 1,056      | 383,457     | 383,457     | 36,764     | 36,764     | 36,764     |
| Norway.....                          | 2,400,785  | 83,601     | 3,840,010   | 1,056      | 1,056      | 2,227,135   | 2,227,135   | 36,764     | 36,764     | 36,764     |
| Portugal.....                        | 2,400,785  | 4,226,895  | 64,447      | 2,776,044  | 1,025,672  | 2,351,100   | 2,351,100   | 36,764     | 36,764     | 36,764     |
| Rumania.....                         | 7,310,084  | 67,011,798 | 88,781      | 1,110      | 1,110      | 5,453,484   | 5,453,484   | 36,764     | 36,764     | 36,764     |
| Spain.....                           | 731,182    | 88,781     | 88,781      | 1,110      | 1,110      | 247,514,473 | 247,514,473 | 36,764     | 36,764     | 36,764     |
| Sweden.....                          | 3,268,856  | 20,944     | 10,330,240  | 221,760    | 2,240      | 1,152,508   | 1,152,508   | 36,764     | 36,764     | 36,764     |
| Switzerland.....                     | 20,260,800 | 725,760    | 1,679,833   | 221,760    | 2,240      | 1,152,508   | 1,152,508   | 36,764     | 36,764     | 36,764     |
| United Kingdom.....                  | 1,679,833  | 221,760    | 221,760     | 2,240      | 2,240      | 1,152,508   | 1,152,508   | 36,764     | 36,764     | 36,764     |
| Canada (year beginning April 1)..... | 43,072,635 | 55,530,712 | 1,298,855   | 1,298,855  | 1,298,855  | 99,790,425  | 99,790,425  | 31,087,200 | 31,087,200 | 31,087,200 |
| United States.....                   | 7,940,885  | 16,814,488 | 7,498,658   | 7,498,658  | 7,498,658  | 3,734,908   | 3,734,908   | 853,820    | 853,820    | 853,820    |
| Cuba.....                            | 52,717,196 | 20,940,226 | 15,355,211  | 1,419,555  | 1,419,555  | 20,825,857  | 20,825,857  | 853,820    | 853,820    | 853,820    |
| Argentina.....                       | 8,681,907  | 1,014,343  | 4,006,036   | 4,006,036  | 4,006,036  | 3,065,794   | 3,065,794   | 853,820    | 853,820    | 853,820    |
| Brazil.....                          | 6,378,900  | 7,404,050  | 406,747     | 26,953     | 26,953     | 467,961     | 467,961     | 853,820    | 853,820    | 853,820    |
| Chile.....                           | 798,178    | 119,067    | 141,733     | 141,733    | 141,733    | 269,067     | 269,067     | 853,820    | 853,820    | 853,820    |
| Peru.....                            | 137,040    | 522,041    | 132,675     | 1,586      | 1,586      | 21,578      | 21,578      | 853,820    | 853,820    | 853,820    |
| Australia (year ending June 30)..... | 533,192    | 35,272     | 2,530       | 2,530      | 2,530      | 244,583     | 244,583     | 853,820    | 853,820    | 853,820    |
| New Zealand.....                     | 56,246     | 292,212    | 102,680     | 102,680    | 102,680    | 1,206       | 1,206       | 853,820    | 853,820    | 853,820    |
| Philippine Islands.....              | 273,784    | 17,140,120 | 1,610,894   | 22,412,429 | 22,412,429 | 51,585,493  | 51,585,493  | 853,820    | 853,820    | 853,820    |
| French Africa.....                   | 92,151     | 1,068,932  | 2,400,441   | 2,400,441  | 2,400,441  | 1,968,450   | 1,968,450   | 853,820    | 853,820    | 853,820    |
| Egypt.....                           | 4,080,820  | 4,215,182  | 2,400,441   | 2,400,441  | 2,400,441  | 1,968,450   | 1,968,450   | 853,820    | 853,820    | 853,820    |

1 Data unavailable.

2 Commerce Reports.

3 Calendar year.

NOTE.—Except as otherwise indicated, sources for the above data may be noted as follows:

Belgium: Bulletin Mensuel du Commerce Spécial de la Belgique avec les Pays Etrangers.

Denmark: Danmarks Vareindførsel og Udførsel. Also, Varesættningen med Udlændt (Danmark).

Finland: Handel Finland.

France: Tableau Général du Commerce et de la Navigation, Vol. I. Also, Documents Statistiques sur le Commerce de la France.

Greece: Bulletin Mensuel du Commerce Spécial de la Grèce.

Italy: Movimento Commerciale del Regno d'Italia.

Netherlands: Statistiek van den in- en uit- en Doorvoer Nederlanden. Also, Maandstatistiek.

Norway: Norges Handel.

Portugal: Estatística Commerciale e Navegação Republica Portuguesa.

Rumania: Bulletin Semestriel de la Statistique Commerciale (Fascicule II).

Sweden: Estadística del Comercio Exterior de España.

Switzerland: Statistique du Commerce de la Suisse avec l'Etranger.

United Kingdom: Accounts Relating to Trade and Navigation of the United Kingdom.

Canada: Monthly Report of the Trade of Canada.

United States: Commerce and Navigation of the United States.

Cuba: Comercio Exterior, Republica de Cuba.

Argentina: Anuario de la Dirección General de Estadística.

Brazil: Commercio Exterior do Brasil.

Chile: Estadística del Comercio Especial del Perú.

Peru: Estadística del Comercio Especial del Perú.

Japan: Annual Return of Foreign Trade—Japan.

Australia: Trade Customs and Excise Revenue of the Commonwealth of Australia.

New Zealand: Trade and Interchange, Vol. II.

Philippine Islands: Annual Report of the Bureau of Customs and Foreign Commerce of the Philippine Islands.

Egypt: Monthly Summary of the Foreign Trade of Egypt (December).

TABLE 433.—*International trade in peanut oil.*

[Conversions on basis of 7.5 pounds to the gallon.]

| Countries.              | 1913                 |                      | 1917                        |                             | 1918                        |                             | 1919                 |                    | 1920                 |                      |
|-------------------------|----------------------|----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------|--------------------|----------------------|----------------------|
|                         | Imports.             | Exports.             | Imports.                    | Exports.                    | Imports.                    | Exports.                    | Imports.             | Exports.           | Imports.             | Exports.             |
| Belgium.....            | Pounds.<br>3,332,595 | Pounds.<br>1,946,300 | Pounds.<br>( <sup>1</sup> ) | Pounds.<br>( <sup>1</sup> ) | Pounds.<br>( <sup>1</sup> ) | Pounds.<br>( <sup>1</sup> ) | Pounds.<br>2,539,727 | Pounds.<br>315,778 | Pounds.<br>2,539,106 | Pounds.<br>1,703,164 |
| Denmark.....            | 4,471,811            | 53,427,379           | 4,558,230                   | 11,674,018                  | ( <sup>1</sup> )            | ( <sup>1</sup> )            | 1,089,293            | 2,436,720          | 998,684              |                      |
| France.....             | 67,681               | 220                  |                             |                             | 2,301,382                   | 3,755,536                   | 7,623,460            |                    |                      |                      |
| Italy.....              | 7,631,003            | 21,415,747           | 7,969,547                   | 973,935                     | 2,040,859                   | 48,385                      | 789,026              | 5,641,743          | 12,253,387           | 53,351               |
| Netherlands.....        | 6,534,915            |                      |                             |                             | 186,245                     | 79                          | 5,422,928            |                    | 2,266,768            | 8,702,083            |
| Norway.....             |                      | 18,435               |                             | 99                          |                             |                             |                      | 1,633,102          |                      |                      |
| Spain.....              | 3,123,601            |                      |                             |                             |                             |                             | 2,243,529            | \$ 661             |                      |                      |
| Sweden.....             | 11,271,088           |                      | 27,404,535                  |                             | 68,466,450                  |                             | 154,052,878          | \$ 4,341,803       | 95,124,278           | 1,425,225            |
| United States.....      | ( <sup>1</sup> )     | 34,209,733           | ( <sup>1</sup> )            | 61,807,067                  | ( <sup>1</sup> )            | 78,750,367                  | ( <sup>1</sup> )     | 163,223,067        |                      |                      |
| China.....              |                      |                      |                             |                             | \$ 13,669,333               | \$ 12,703,333               | \$ 9,182,533         | \$ 22,066,400      |                      |                      |
| Hongkong.....           |                      |                      |                             |                             |                             | 337,965                     |                      | 996,479            |                      |                      |
| Indo-China.....         | \$ 146,727           |                      |                             |                             | 1,007,094                   |                             | 1,176,901            |                    |                      |                      |
| Philippine Islands..... | 1,381,117            |                      | 1,252,661                   |                             |                             |                             | 560,463              |                    | 16,878               |                      |
| Egypt.....              |                      |                      |                             |                             |                             |                             |                      |                    |                      |                      |

<sup>1</sup> Data unavailable.

\* Commerce Reports.

\* July 1 to December 31

† Not separately stated.

TABLE 434.—*International trade in linseed oil.*

[Conversions made on the basis of 7.5 pounds to the gallon.]

| Countries.                           | 1913                   |                        | 1917               |                       | 1918                  |                       | 1919                   |                        | 1920                  |                        |
|--------------------------------------|------------------------|------------------------|--------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------|
|                                      | Imports.               | Exports.               | Imports.           | Exports.              | Imports.              | Exports.              | Imports.               | Exports.               | Imports.              | Exports.               |
| Belgium.....                         | Pounds<br>18, 105, 419 | Pounds<br>15, 827, 807 | Pounds<br>470, 775 | Pounds<br>(1) 48, 671 | Pounds<br>(1) 48, 671 | Pounds<br>(1) 48, 671 | Pounds<br>20, 271, 248 | Pounds<br>10, 687, 131 | Pounds<br>4, 131, 826 | Pounds<br>16, 117, 085 |
| Finland.....                         | 4, 671, 768            | 5, 783, 327            | 29, 531, 058       | 4, 920, 006           | 5, 009, 078           | 4, 238, 130           | * 4, 238, 130          | * 2, 321, 223          |                       |                        |
| France.....                          | 13, 533                |                        | 124, 707           |                       | 4, 157, 484           |                       | * 45, 086, 638         |                        |                       |                        |
| Greece.....                          | 985, 286               | 105, 667               | 5, 880, 470        | 268, 741              | 2, 789, 921           | 373, 357              | 8, 337, 138            | 3, 427, 051            | 9, 219, 637           | 395, 054               |
| Italy.....                           | 1, 214, 675            | 56, 102, 357           | 5, 172             | 2, 332, 714           | 33, 336               | 157, 929              | 2, 631, 900            | 35, 170, 215           | 2, 137, 320           | 59, 238, 673           |
| Netherlands.....                     | 5, 327, 623            | 10, 565                | 4, 062, 664        | 1, 708                | 157, 563              |                       | 8, 898, 746            |                        | 2, 305, 419           |                        |
| Norway.....                          | 85, 750                |                        | (1)                | (1)                   |                       |                       | 12, 531                |                        |                       |                        |
| Rumania.....                         | 702, 688               | 3, 554                 | 628, 337           |                       | 529, 395              | 1, 825                | * 6, 945, 061          | * 325, 591             |                       |                        |
| Sweden.....                          | 10, 513, 958           | 13, 389                | 4, 986, 805        |                       | 2, 663, 157           |                       | 2, 381, 208            | 703, 929               |                       |                        |
| Switzerland.....                     | 26, 629, 120           | 67, 000, 640           |                    | 42, 981, 120          |                       | 3, 923, 720           | 2, 185, 204            | 108, 004, 480          | 3, 669, 120           | 108, 928, 960          |
| United Kingdom.....                  | 28, 263, 512           | (3)                    | 352, 015           | (3)                   | 70, 269               |                       | 4, 896, 108            | (3)                    |                       |                        |
| Canada (Year Beginning Apr. 1).....  | 1, 213, 270            | 11, 830, 782           | 633, 022           | 11, 464, 688          | 195, 983              | 5, 806, 440           | 16, 142, 835           | 11, 266, 335           | 35, 200, 200          | 5, 365, 875            |
| United States.....                   | 1, 139, 231            |                        | 300, 644           | 3, 362, 640           | 36, 893               | 8, 923, 623           | 265, 066               | 4, 512, 851            |                       |                        |
| Argentina.....                       | 10, 687, 682           |                        | 6, 029, 156        |                       | 4, 185, 315           |                       | 5, 732, 703            |                        |                       |                        |
| Brazil.....                          |                        | 35, 009                | 1, 707, 740        |                       | 703, 603              |                       |                        |                        |                       |                        |
| Chile.....                           | 1, 013, 359            |                        | 585, 648           |                       | * 530, 987            |                       | 655, 849               |                        |                       |                        |
| Peru.....                            | 3, 857, 181            |                        | 895, 715           |                       | 47, 397               |                       | 683, 100               | 5, 220, 253            | 2, 594, 484           | 3, 125, 059            |
| British India.....                   | 3, 104, 491            | 785, 761               | 3, 307, 388        | 2, 904, 639           | 2, 944, 751           |                       | 2, 287, 137            |                        |                       |                        |
| Dutch East Indies.....               | 3, 582, 269            |                        | 143, 267           |                       | 441, 897              |                       | 375, 467               |                        |                       |                        |
| Japan.....                           |                        |                        |                    | 555, 778              | 397, 931              |                       |                        |                        |                       |                        |
| Australia (Year ending June 30)..... | 4, 983, 409            |                        | 3, 088, 672        |                       | 1, 193, 491           |                       | * 1, 705, 161          | 369                    |                       |                        |
| New Zealand.....                     | 1, 019, 572            |                        | 4, 437, 635        |                       | 4, 349, 043           |                       | 676, 494               |                        |                       |                        |
| Philippine Islands.....              | 3, 792, 162            |                        | 1, 963, 665        |                       | 1, 178, 377           |                       | 1, 670, 939            |                        |                       |                        |
| Union of South Africa.....           |                        |                        |                    |                       | 3, 721, 704           |                       | * 252, 925             | 3, 168, 310            |                       |                        |
| French Africa.....                   | 3, 540, 224            |                        | * 23, 072          |                       | * 132, 263            |                       | 1, 292, 608            |                        |                       |                        |
| Egypt.....                           |                        |                        | 1, 058, 808        |                       | 1, 157, 274           |                       |                        |                        | 2, 034, 108           |                        |

\* Commerce Reports.

† No data available.

‡ Including imports for the New Zealand Government, as follows: 1917, 117 659 pounds; 1918, 275,802 pounds; 1919, 135,394 pounds.

§ Not separately stated.



## COST DATA FOR FARM PRODUCTS.

With the growing complexity of the farmer's economic problems has come an increasing demand for reliable information relative to the cost of producing various farm products. Investigators, teachers, and students, as well as farmers, are realizing more and more the necessity of basing the analysis of their problems on cost data.

In the past decade the United States Department of Agriculture, either directly or in cooperation with the State agricultural colleges, has gathered a considerable amount of information on farm costs. The results of most of these studies have already been published. Some of these investigations, however, were conducted chiefly for the purpose of obtaining information for miscellaneous office use, and consequently the results thereof have never been made available to the public.

To make readily available the essential facts brought out by these investigations, this information is here combined into summary tables, giving the labor and material requirements as well as the money cost per unit for all farm products for which data are available.

Unfortunately a great deal of experimental work had to be done at the beginning in trying out methods for obtaining the records from the farmer, as well as in posting and summarizing the results. For this reason some of the cost figures gathered in the earlier studies are not directly comparable, and can not be used properly in drawing comparisons between costs in different regions, nor in a comparison of variations in costs brought about by different farm practices. When it is desired to make direct comparisons between the costs quoted in the following tables *from two or more different sources*, the investigator is urged to refer to the original publications to see whether the particular factors which he wishes to compare have been handled according to the same principles.

In general it may be stated that all the live-stock figures are comparable, excepting those for dairy cows. In this latter table there are some variations, especially in the items that different investigators have included as overhead. The data on cost of tractors, motor trucks, sugar beets, beans, cotton, potatoes, tobacco, grain sorghums, and apples are also comparable for the various regions concerned.

It has been the object here to give all of the figures exactly as they appear in the original publications from which they are taken. In some instances, however, where the original tables give the various items of cost in great detail, it has been necessary to combine some of these in order to reduce the size of the tables. A few investigators have also included certain items that are usually left out of consideration, as, for example, estimated charges for cost of management, interest on current operating expenses, and, for some crops, building charges. To gain the greatest uniformity in these tables these unusual items have been dropped in all cases in which the original tables present them separately.

COST OF TRACTOR WORK.<sup>1</sup>

TABLE 435.—Average cost per acre of using 2-plow and 3-plow tractors for Alabama, Georgia, Tennessee, and North and South Carolina, with disk and moldboard plows for plowing in 1920.

| Kind and size of plow pulled. | Number of records. | Depreciation. | Repairs. | Interest. | Gasoline. <sup>1</sup> | Kerosene. <sup>2</sup> | Oil. <sup>3</sup> | Total.                 |                        |
|-------------------------------|--------------------|---------------|----------|-----------|------------------------|------------------------|-------------------|------------------------|------------------------|
|                               |                    |               |          |           |                        |                        |                   | For gasoline tractors. | For kerosene tractors. |
| 2-plow, disk .....            | 412                | \$0.53        | \$0.16   | \$0.18    | \$1.14                 | \$0.78                 | \$0.17            | \$2.18                 | \$1.82                 |
| 2-plow, moldboard .....       | 108                | .45           | .13      | .15       | .95                    | .65                    | .16               | 1.84                   | 1.54                   |
| 2-plow, all .....             |                    | .51           | .15      | .17       | 1.07                   | .73                    | .17               | 2.07                   | 1.73                   |
| 3-plow, disk .....            | 107                | .47           | .15      | .17       | 1.01                   | .69                    | .16               | 1.96                   | 1.64                   |
| 3-plow, moldboard .....       | 25                 | .46           | .14      | .16       | .89                    | .62                    | .11               | 1.76                   | 1.49                   |
| 3-plow, all .....             |                    | .46           | .15      | .16       | .98                    | .67                    | .15               | 1.90                   | 1.59                   |

<sup>1</sup> 30.7 cents per gallon.<sup>2</sup> 20.4 cents per gallon.<sup>3</sup> 85.2 cents per gallon.

NOTE.—Cost of fuel for kerosene-burning tractors includes gasoline for starting (average value \$0.02 per acre). Repairs computed on basis of an annual repair charge of 4 per cent of first cost of machine. Annual interest charge equalled 8 per cent of average investment.

TABLE 436.—Cost of power on tractor farms of different sizes (Ohio, Indiana, Illinois).

| Size of farm (crop acres). | Number of farms. | Cost of keeping horses. | Cost of tractor for drawbar work. | Total cost of power. | Per cent tractor cost was of total cost. |
|----------------------------|------------------|-------------------------|-----------------------------------|----------------------|--|
| Less than 80 .....         | 7                | \$821                   | \$172                             | \$793                | 21.7                                     |
| 80 to 119 .....            | 28               | 660                     | 279                               | 939                  | 29.7                                     |
| 120 to 159 .....           | 71               | 849                     | 279                               | 1,128                | 24.7                                     |
| 160 to 199 .....           | 56               | 1,006                   | 331                               | 1,337                | 24.8                                     |
| 200 to 239 .....           | 47               | 1,120                   | 340                               | 1,460                | 23.3                                     |
| 240 to 279 .....           | 36               | 1,292                   | 386                               | 1,678                | 23.0                                     |
| 280 to 319 .....           | 19               | 1,367                   | 452                               | 1,819                | 24.8                                     |
| 320 and over .....         | 22               | 1,966                   | 576                               | 2,542                | 22.6                                     |
| All .....                  | 286              | 1,076                   | 341                               | 1,417                | 24.1                                     |

TABLE 437.—Cost of power for different operations as furnished by horses and by tractors (Ohio, Indiana, Illinois).

[Cost per acre.]

| Operation.                    | 1920    |           |         |        | 1921    |           |
|-------------------------------|---------|-----------|---------|--------|---------|-----------|
|                               | Horses. | Tractors. |         |        | Horses. | Tractors. |
|                               |         | 2-plow.   | 3-plow. | All.   |         |           |
| Spring plowing .....          | \$2.89  | \$2.01    | \$2.15  | \$2.07 | \$1.53  | \$1.70    |
| Fall plowing .....            | 3.04    | 2.06      | 2.22    | 2.13   | 1.62    | 1.75      |
| Disking .....                 | .64     | .71       | .59     | .67    | .34     | .55       |
| Disking in combination .....  | .98     | .71       | .76     | .72    | .52     | .59       |
| Harrowing, rolling, etc ..... | .34     | .35       | .49     | .37    | .18     | .30       |
| Drawing hay loader .....      | .98     | 1.14      | 1.05    | 1.11   | .52     | .91       |
| Drawing grain binder .....    | .59     | .64       | .76     | .67    | .31     | .55       |

NOTE.—The cost of man labor and of the implements used must be added to the cost of power to obtain the total cost of performing the different operations. The horse costs shown for 1921 are 63 per cent and the tractor costs 32 per cent of the 1920 costs.

<sup>1</sup> Table 435 taken from U. S. Dept. of Agriculture, Farmers' Bul. 1278. Tables 436-442 taken from U. S. Dept. of Agriculture Bul. 997.

## COST OF TRACTOR WORK—Continued.

TABLE 438.—*Fuel and oil requirements per day and per acre of tractors for different operations (Ohio, Indiana, Illinois).*

## 2-PLOW TRACTORS.

| Operation.                  | Number of tractors. | Requirements per day. |        | Requirements per acre. |        |
|-----------------------------|---------------------|-----------------------|--------|------------------------|--------|
|                             |                     | Fuel.                 | Oil.   | Fuel.                  | Oil.   |
|                             |                     | Galls.                | Galls. | Galls.                 | Galls. |
| Spring plowing.....         | 104                 | 17.97                 | 1.10   | 2.71                   | 0.17   |
| Fall plowing.....           | 120                 | 18.46                 | 1.06   | 2.86                   | .16    |
| Disking.....                | 95                  | 17.98                 | 1.03   | .83                    | .05    |
| Disking in combination..... | 101                 | 17.78                 | 1.09   | .90                    | .05    |
| Harrowing, etc.....         | 43                  | 16.23                 | 1.61   | .42                    | .03    |
| Drawing hay loader.....     | 24                  | 11.45                 | .85    | 1.00                   | .08    |
| Drawing grain binder.....   | 101                 | 14.50                 | .92    | .73                    | .05    |

## 3-PLOW TRACTORS.

|                             |    |       |      |      |      |
|-----------------------------|----|-------|------|------|------|
| Spring plowing.....         | 94 | 23.12 | 1.29 | 2.08 | 0.15 |
| Fall plowing.....           | 80 | 23.33 | 1.32 | 2.71 | .15  |
| Disking.....                | 46 | 22.02 | 1.34 | .71  | .04  |
| Disking in combination..... | 64 | 22.74 | 1.30 | .95  | .05  |
| Harrowing, etc.....         | 7  | 21.60 | 1.51 | .43  | .03  |
| Drawing hay loader.....     | 13 | 15.06 | 1.09 | 1.30 | .09  |
| Drawing grain binder.....   | 27 | 17.31 | 1.16 | .75  | .05  |

TABLE 439.—*Days of tractor work on farms of different sizes, 1920 (Ohio, Indiana, Illinois).*

| Size of farm (crop acres). | Number of farms. | Days of work on home farm. |       | Days of custom work. |       | Total days. |
|----------------------------|------------------|----------------------------|-------|----------------------|-------|-------------|
|                            |                  | Draw-bar.                  | Belt. | Draw-bar.            | Belt. |             |
| Less than 80.....          | 7                | 11.1                       | 2.0   | 4.0                  | 5.9   | 23.0        |
| 80 to 119.....             | 23               | 17.5                       | 2.3   | 2.3                  | 3.1   | 25.2        |
| 120 to 159.....            | 71               | 19.1                       | 3.1   | 2.6                  | 3.7   | 28.5        |
| 160 to 199.....            | 56               | 22.1                       | 3.0   | 2.2                  | 2.4   | 29.7        |
| 200 to 239.....            | 47               | 26.0                       | 2.1   | 1.3                  | 1.3   | 30.7        |
| 240 to 279.....            | 36               | 28.5                       | 2.1   | 1.9                  | 1.6   | 34.1        |
| 280 to 319.....            | 19               | 31.7                       | 2.0   | 1.5                  | 0.4   | 35.6        |
| 320 and over.....          | 22               | 32.6                       | 3.9   | 1.0                  | 4.3   | 41.8        |
| All.....                   | 280              | 23.5                       | 2.7   | 2.0                  | 2.6   | 30.8        |

TABLE 440.—*Average number of days per year 2-plow and 3-plow tractors were used for different drawbar operations and average number of acres covered per day, 1920 (Ohio, Indiana, Illinois).*

[174 two-plow tractors and 104 three-plow tractors.]

| Operation.                   | 2-plow.        |                | 3-plow.        |                |
|------------------------------|----------------|----------------|----------------|----------------|
|                              | Days per year. | Acres per day. | Days per year. | Acres per day. |
| Spring plowing.....          | 7.9            | 6.62           | 6.3            | 8.63           |
| Fall plowing.....            | 5.1            | 6.46           | 5.2            | 8.62           |
| Disking.....                 | 4.0            | 21.60          | 2.3            | 30.78          |
| Disking in combination.....  | 3.4            | 19.09          | 4.0            | 23.83          |
| Harrowing, rolling, etc..... | 1.1            | 39.05          | .2             | 51.38          |
| Drawing hay loader.....      | .4             | 10.50          | .4             | 11.57          |
| Cutting grain.....           | 1.9            | 19.73          | .9             | 23.22          |
| Other work.....              | 2.0            | .....          | .9             | .....          |
| Total.....                   | 25.8           | .....          | 20.2           | .....          |

## COST OF TRACTOR WORK—Continued.

TABLE 441.—Proportion of different operations done with horses and with tractors, all farms (Ohio, Indiana, Illinois).

| Operation.                        | Days of horse labor per farm. | Horse-days equivalent of tractor work. | Total. | Percentage done with tractors. |
|-----------------------------------|-------------------------------|--|--------|--------------------------------|
| Plowing.....                      | 18.9                          | 109.2                                  | 128.1  | 85.2                           |
| Fitting ground after plowing..... | 34.5                          | 68.4                                   | 102.9  | 66.5                           |
| Seeding grain.....                | 11.8                          | .....                                  | 11.8   | .....                          |
| Planting corn.....                | 12.2                          | .....                                  | 12.2   | .....                          |
| Cultivating.....                  | 80.2                          | .....                                  | 80.4   | .....                          |
| Haying.....                       | 17.4                          | 1.5                                    | 18.9   | 7.9                            |
| Cutting grain.....                | 10.7                          | 7.4                                    | 18.1   | 40.9                           |
| Threshing.....                    | 31.3                          | .....                                  | 31.3   | .....                          |
| Corn harvest.....                 | 99.0                          | .....                                  | 99.0   | .....                          |
| Other fieldwork.....              | 4.4                           | 7.9                                    | 12.3   | .....                          |
| Hauling manure.....               | 43.8                          | .....                                  | 43.8   | .....                          |
| Other work on farm.....           | 49.1                          | .....                                  | 49.1   | .....                          |
| Road hauling.....                 | 36.4                          | .....                                  | 36.4   | .....                          |
| Total.....                        | 449.9                         | 104.4                                  | 644.3  | 30.1                           |

TABLE 442.—Number of tractors of different sizes on farms of different sizes (Ohio, Indiana, Illinois).

| Size of farms (crop acres). | Number of farms. | 1-plow tractor. | 2-plow tractors. | 3-plow tractors. | 4-plow tractors. | 5-plow tractor. |
|-----------------------------|------------------|-----------------|------------------|------------------|------------------|-----------------|
| Less than 80.....           | 7                | .....           | 5                | 2                | .....            | .....           |
| 80 to 119.....              | 28               | 1               | 23               | 5                | .....            | .....           |
| 120 to 159.....             | 71               | .....           | 53               | 19               | .....            | .....           |
| 160 to 199.....             | 56               | .....           | 29               | 26               | 1                | .....           |
| 200 to 239.....             | 47               | .....           | 27               | 18               | 2                | .....           |
| 240 to 279.....             | 36               | .....           | 18               | 18               | .....            | .....           |
| 280 to 319.....             | 19               | .....           | 10               | 9                | .....            | .....           |
| 320 or more.....            | 22               | .....           | 11               | 7                | 3                | 1               |
| Total.....                  | 286              | 1               | 174              | 104              | 6                | 1               |

COST OF MOTOR TRUCK WORK.<sup>1</sup>

TABLE 443.—Cost of operating motor trucks of different sizes in Corn Belt (1920):

| Item.                                    | Size.             |         |                   |         |
|--|-------------------|---------|-------------------|---------|
|  | 1-ton and 1½-ton. | 1-ton.  | 1½-ton and 1-ton. | 2-ton.  |
| Fixed charges:                           |                   |         |                   |         |
| Annual depreciation.....                 | \$245             | \$158   | \$239             | \$288   |
| Annual repairs.....                      | 75                | 75      | 100               | 150     |
| Annual interest.....                     | 51                | 34      | 63                | 73      |
| Annual registration and license fee..... | 15                | 12      | 14                | 20      |
| Total fixed charges.....                 | 386               | 279     | 416               | 531     |
| Miles traveled per year.....             | 3,928             | 2,630   | 2,570             | 2,837   |
| Fixed charges per mile.....              | \$0.098           | \$0.106 | \$0.162           | \$0.187 |
| Gasoline and oil per mile.....           | .024              | .029    | .030              | .037    |
| Tires per mile.....                      | .030              | .017    | .021              | .034    |
| Total cost per mile.....                 | .152              | .152    | .213              | .258    |

<sup>1</sup> From U. S. Dept. of Agriculture Bul. 931.<sup>2</sup> Gasoline 26 cents per gallon and oil 70 cents per gallon.

## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS.

TABLE 444.—*Corn: Labor and material requirements per acre, exclusive of marketing (253 records).<sup>1</sup>*

## CORN-BELT AREAS (CORN HARVESTED FROM STANDING STALK).

| Region.                | Number of records. | Average yield per acre. | Man labor.        |             |             | Horse labor.      |                              |             | Seed.       | Ma-nure.       | Fertilizer. | Twine.      |
|------------------------|--------------------|-------------------------|-------------------|-------------|-------------|-------------------|------------------------------|-------------|-------------|----------------|-------------|-------------|
|                        |                    |                         | Prior to harvest. | Harvest.    | Total.      | Prior to harvest. | Harvest from standing stalk. | Total.      |             |                |             |             |
|                        |                    | <i>Bush.</i>            | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>       | <i>Hrs.</i>                  | <i>Hrs.</i> | <i>Lbs.</i> | <i>Lloads.</i> | <i>Lbs.</i> | <i>L's.</i> |
| Kansas.....            | 25                 | 25                      | 15.6              | 6.1         | 21.7        | 34.5              | 12.3                         | 46.8        | 7.7         | 0.6            | .....       | .....       |
| Nebraska.....          | 11                 | 40                      | 9.5               | 5.0         | 14.5        | 28.2              | 10.1                         | 38.4        | 8.0         | .7             | .....       | .....       |
| Southwestern Iowa..... | 18                 | 48                      | 10.0              | 6.3         | 16.3        | 30.2              | 12.7                         | 42.9        | 8.3         | .7             | .....       | .....       |
| East central Iowa..... | 55                 | 48                      | 12.0              | 6.4         | 18.4        | 32.0              | 12.8                         | 44.8        | 8.0         | 1.4            | .....       | .....       |
| Western Illinois.....  | 30                 | 46                      | 13.1              | 6.6         | 19.7        | 33.2              | 12.9                         | 46.1        | 8.1         | 1.0            | .....       | .....       |
| Eastern Illinois.....  | 16                 | 42                      | 11.0              | 5.7         | 16.7        | 33.5              | 11.5                         | 45.0        | 7.7         | .6             | .....       | .....       |
| Indiana.....           | 14                 | 49                      | 17.3              | 8.3         | 25.6        | 42.8              | 16.5                         | 59.3        | 7.9         | 1.0            | 22          | .....       |

## EASTERN AREAS (CORN CUT AND HARVESTED FROM SHOCK).

|                   |    |    |      |      |      |      |      |      |      |     |       |     |
|-------------------|----|----|------|------|------|------|------|------|------|-----|-------|-----|
| Ohio.....         | 13 | 45 | 20.4 | 28.5 | 48.9 | 38.5 | 14.5 | 53.0 | 8.2  | 2.2 | 27    | 2.0 |
| Virginia.....     | 12 | 52 | 22.1 | 27.9 | 50.0 | 41.9 | 17.7 | 59.6 | 10.4 | 2.0 | 35    | 1.6 |
| Maryland.....     | 12 | 60 | 23.5 | 36.0 | 59.5 | 45.2 | 18.5 | 63.7 | 8.7  | 3.8 | ..... | 2.2 |
| Pennsylvania..... | 22 | 62 | 19.1 | 31.2 | 50.3 | 40.6 | 13.4 | 54.0 | 7.6  | 4.0 | 54    | 2.8 |
| Delaware.....     | 25 | 47 | 19.4 | 35.1 | 54.5 | 40.0 | 12.0 | 52.0 | 11.9 | 5.1 | 76    | 2.9 |

<sup>1</sup> The labor and material requirements as reported constitute 85 per cent of the operating expense in the Corn Belt and 88 per cent in eastern districts.

TABLE 445.—*Corn silage: Labor and material requirements per acre (271 records).*

| Region.        | Number of records. | Average yield. | Man labor.        |             |             | Horse labor.      |             |             | Seed.       | Ma-nure.       | Fertilizer. | Fuel.        |             | Twine.      | Per cent operating expense covered by foregoing. |
|----------------|--------------------|----------------|-------------------|-------------|-------------|-------------------|-------------|-------------|-------------|----------------|-------------|--------------|-------------|-------------|--|
|                |                    |                | Prior to harvest. | Harvest.    | Total.      | Prior to harvest. | Harvest.    | Total.      |             |                |             | Gas.         | Coal.       |             |  |
|                |                    | <i>Tons.</i>   | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Lbs.</i> | <i>Lloads.</i> | <i>Lbs.</i> | <i>Gals.</i> | <i>Lbs.</i> | <i>Lbs.</i> |  |
| Minnesota..... | 30                 | 7.1            | 13.4              | 10.2        | 23.6        | 36.6              | 15.7        | 52.3        | 14.0        | 3.6            | .....       | .....        | 22.0        | 3.3         | 76   |
| Wisconsin..... | 97                 | 9.4            | 14.5              | 15.6        | 30.1        | 34.1              | 19.5        | 53.6        | 11.4        | 4.7            | .....       | 2.5          | 20.5        | 3.6         | 84   |
| Iowa.....      | 55                 | 9.8            | 12.9              | 15.0        | 27.9        | 31.9              | 20.0        | 51.9        | 9.9         | 2.2            | .....       | 2.2          | 14.0        | 3.6         | 86   |
| New York.....  | 83                 | 13.0           | 26.5              | 25.6        | 52.1        | 45.3              | 19.6        | 64.9        | 24.2        | 6.1            | 219.0       | 2.1          | 16.0        | 4.1         | 79   |
| Ohio.....      | 6                  | 8.3            | 27.2              | 24.1        | 51.3        | 38.7              | 22.5        | 61.2        | 7.8         | 6.2            | .....       | .....        | .....       | 2.2         | 84   |

<sup>1</sup> Excluding interest on land.

NOTE.—Data on labor and material required per acre are from U. S. Dept. of Agriculture Bul. 1000.

## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 446.—Cotton: Labor and material requirements per acre (842 records, 1918 crop).

| Region.            | Number of records. | Yield of lint per acre. | Man labor.        |          |        | Mule labor.       |          |        | Seed. | Fertilizer. | Per cent of operating expense covered by foregoing. |
|--------------------|--------------------|-------------------------|-------------------|----------|--------|-------------------|----------|--------|-------|-------------|---|
|                    |                    |                         | Prior to harvest. | Harvest. | Total. | Prior to harvest. | Harvest. | Total. |       |             |   |
| South Carolina:    |                    | Lbs.                    | Hrs.              | Hrs.     | Hrs.   | Hrs.              | Hrs.     | Hrs.   | Lbs.  | Lbs.        |   |
| Anderson Co.....   | 89                 | 248                     | 75                | 56       | 131    | 45                | 12       | 57     | 25    | 404         | 86  |
| Barnwell Co.....   | 91                 | 268                     | 73                | 63       | 136    | 45                | 17       | 62     | 31    | 555         | 86  |
| Georgia:           |                    |                         |                   |          |        |                   |          |        |       |             |   |
| Laurens Co.....    | 85                 | 277                     | 61                | 64       | 125    | 44                | 16       | 60     | 25    | 288         | 85  |
| Greene Co.....     | 78                 | 260                     | 74                | 57       | 131    | 47                | 13       | 60     | 35    | 257         | 85  |
| Sumter Co.....     | 89                 | 244                     | 81                | 55       | 136    | 53                | 11       | 64     | 38    | 286         | 84  |
| Alabama:           |                    |                         |                   |          |        |                   |          |        |       |             |   |
| Tallapoosa Co..... | 89                 | 172                     | 85                | 39       | 124    | 50                | 9        | 59     | 35    | 187         | 87  |
| Marshall Co.....   | 90                 | 227                     | 76                | 51       | 127    | 51                | 8        | 59     | 30    | 333         | 85  |
| Dale.....          | 90                 | 194                     | 67                | 50       | 117    | 46                | 7        | 53     | 28    | 250         | 85  |
| Texas:             |                    |                         |                   |          |        |                   |          |        |       |             |   |
| Ellis Co.....      | 75                 | 176                     | 31                | 25       | 56     | 33                | 4        | 37     | 22    | .....       | 79  |
| Rusk Co.....       | 75                 | 185                     | 49                | 37       | 86     | 42                | 8        | 50     | 25    | 145         | 83  |

<sup>1</sup> Excluding interest on land.

TABLE 447.—Cotton: Labor and material requirements per acre (821 records, 1919 crop).

| Region.                   | Number of records. | Yield.  |       | Man labor.        |          |        | Mule labor.       |          |        | Seed. | Fertilizer.      | Ginning charge. |
|---------------------------|--------------------|---|-------|-------------------|----------|--------|-------------------|----------|--------|-------|------------------|-----------------|
|                           |                    | Lint.   | Seed. | Prior to harvest. | Harvest. | Total. | Prior to harvest. | Harvest. | Total. |       |                  |                 |
| South Carolina:           |                    | Lbs.  | Lbs.  | Hrs.              | Hrs.     | Hrs.   | Hrs.              | Hrs.     | Hrs.   | Lbs.  | Lbs.             | P. cwt.         |
| Anderson Co. <sup>1</sup> | 74                 | 286   | 495   | 80                | 60       | 140    | 45                | 14       | 59     | 35    | 449              | 81.00           |
| Barnwell Co....           | 76                 | 248   | 408   | 65                | 52       | 117    | 41                | 12       | 53     | 28    | 699              | 1.04            |
| Georgia:                  |                    |   |       |                   |          |        |                   |          |        |       |                  |                 |
| Laurens Co.....           | 77                 | 93  | 168   | 55                | 23       | 78     | 39                | 3        | 42     | 26    | 254              | 1.24            |
| Greene Co.....            | 74                 | 225   | 413   | 63                | 45       | 108    | 40                | 8        | 48     | 37    | 295              | 1.11            |
| Mitchell Co.....          | 50                 | 159   | 300   | 61                | 39       | 100    | 43                | 5        | 48     | 30    | 277              | 1.07            |
| Alabama:                  |                    |   |       |                   |          |        |                   |          |        |       |                  |                 |
| Marshall Co....           | 79                 | 272   | 473   | 70                | 58       | 128    | 46                | 11       | 57     | 31    | 349              | 1.02            |
| Lauderdale Co.            | 84                 | 192   | 345   | 69                | 51       | 120    | 47                | 7        | 54     | 29    | 168              | 1.10            |
| Mississippi:              |                    |   |       |                   |          |        |                   |          |        |       |                  |                 |
| Washington Co.....        | 29                 | 171   | 301   | 87                | 54       | 141    | 47                | 5        | 52     | 35    | .....            | 1.60            |
| Monroe Co.....            | 49                 | 132   | 238   | 54                | 34       | 88     | 35                | 6        | 41     | 34    | ( <sup>2</sup> ) | 1.39            |
| Arkansas:                 |                    |   |       |                   |          |        |                   |          |        |       |                  |                 |
| Lee Co.....               | 83                 | 174   | 363   | 109               | 55       | 164    | 47                | 8        | 55     | 34    | ( <sup>2</sup> ) | 1.35            |
| Texas:                    |                    |   |       |                   |          |        |                   |          |        |       |                  |                 |
| Ellis.....                | 71                 | { <sup>3</sup> 50<br><sup>4</sup> 29<br><sup>5</sup> 24 } |       | 134               | 31       | 15     | 46                | 29       | 2      | 31    | 22               | 1.80            |
| Rusk.....                 | 75                 | 61  | 106   | 48                | 16       | 64     | 37                | 8        | 40     | 22    | 105              | 1.87            |

<sup>1</sup> On 34 owned farms producing wage cotton, man labor, mule labor, seed, fertilizer, and manure constituted 85 per cent of the total operating expense. By adding ginning to the foregoing list the operating expense amounted to 89 per cent of total cost, excluding interest on land.

<sup>2</sup> In Monroe County, Miss., fertilizer was applied on only 13 farms; in Lee County, Ark., on only one.

<sup>3</sup> Picked cotton.

<sup>4</sup> Bollie cotton.

<sup>5</sup> Unginned seed cotton.

## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 448.—Potatoes: Labor and material requirements per acre (918 records), 1912-1918.

| Region.             | Number of records. | Normal yield per acre. | Man labor.        |             |             | Horse labor.      |             |             | Seed.        | Ma-nure.      | Fertilizer. | Per cent of operating expense <sup>1</sup> covered by foregoing. |
|---------------------|--------------------|------------------------|-------------------|-------------|-------------|-------------------|-------------|-------------|--------------|---------------|-------------|--|
|                     |                    |                        | Prior to harvest. | Harvest.    | Total.      | Prior to harvest. | Harvest.    | Total.      |              |               |             |  |
| Early:              |                    | <i>Bush.</i>           | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Bush.</i> | <i>Loads.</i> | <i>Lbs.</i> |  |
| Florida.....        | 42                 | 122                    | 44                | 60          | 104         | 62                | 18          | 80          | 13.2         | .....         | 1,920       | 77   |
| Texas.....          | 43                 | 87                     | 23                | 24          | 47          | 41                | 12          | 53          | 11.4         | .....         | .....       | 80   |
| South Carolina..... | 35                 | 146                    | 68                | 48          | 116         | 54                | 12          | 66          | 14.3         | .....         | 1,980       | 80   |
| Midsommer:          |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Virginia—           |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Norfolk....         | 37                 | 142                    | 54                | 35          | 89          | 47                | 14          | 61          | 11.7         | .....         | 1,840       | 78   |
| Eastern shore....   | 22                 | 139                    | 50                | 32          | 82          | 60                | 11          | 71          | 10.0         | .....         | 1,300       | 72   |
| New Jersey—         |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Southern....        | 31                 | 173                    | 38                | 32          | 70          | 43                | 25          | 68          | 10.8         | 4.7           | 1,680       | 89   |
| Central....         | 36                 | 245                    | 36                | 31          | 67          | 54                | 27          | 81          | 13.1         | 3.4           | 1,500       | 89   |
| Long Island....     | 82                 | 167                    | 43                | 32          | 75          | 48                | 20          | 68          | 12.0         | 2.1           | 1,840       | 89   |
| Late:               |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Maine—              |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Aroostook County .. | 81                 | 254                    | 44                | 51          | 95          | 70                | 34          | 104         | 13.8         | 2.2           | 1,840       | 87   |
| Southern....        | 23                 | 259                    | 48                | 57          | 105         | 71                | 44          | 115         | 14.2         | 4.7           | 1,800       | 90   |
| New York—           |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Northern....        | 19                 | 211                    | 56                | 63          | 119         | 69                | 39          | 108         | 12.6         | 5.5           | 260         | 92   |
| Western....         | 68                 | 151                    | 41                | 42          | 83          | 59                | 33          | 92          | 11.8         | 5.3           | 120         | 87   |
| Southern....        | 56                 | 135                    | 42                | 50          | 92          | 50                | 31          | 81          | 9.4          | 4.2           | 160         | 90   |
| Michigan—           |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Southeastern....    | 20                 | 138                    | 40                | 42          | 82          | 48                | 25          | 73          | 7.4          | 4.7           | .....       | 91   |
| Traverse Bay....    | 20                 | 148                    | 46                | 56          | 102         | 40                | 27          | 67          | 9.9          | 3.6           | .....       | 89   |
| Southwestern....    | 20                 | 145                    | 32                | 46          | 78          | 38                | 28          | 66          | 8.0          | 4.2           | .....       | 89   |
| Wisconsin—          |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Central....         | 47                 | 127                    | 26                | 34          | 60          | 31                | 30          | 61          | 7.0          | 2.6           | .....       | 85   |
| Southern....        | 15                 | 185                    | 37                | 45          | 82          | 44                | 41          | 85          | 15.1         | 3.3           | .....       | 87   |
| Iowa—               |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Eastern....         | 22                 | 174                    | 36                | 33          | 69          | 52                | 33          | 85          | 14.7         | 4.5           | .....       | 88   |
| Grundy County..     | 19                 | 151                    | 25                | 28          | 53          | 49                | 28          | 77          | 16.6         | 1.8           | .....       | 87   |
| Minnesota—          |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Eastern....         | 46                 | 116                    | 32                | 34          | 66          | 38                | 33          | 71          | 7.4          | 3.1           | .....       | 87   |
| Clay County.....    | 25                 | 122                    | 18                | 40          | 58          | 41                | 28          | 69          | 12.2         | 1.8           | .....       | 77   |
| Colorado—           |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Greeley....         | 44                 | 217                    | 31                | 42          | 73          | 67                | 28          | 95          | 11.3         | 2.2           | .....       | 72   |
| Montrose County..   | 19                 | 258                    | 46                | 47          | 93          | 71                | 36          | 107         | 16.2         | 4.5           | .....       | 73   |
| Washington—         |                    |                        |                   |             |             |                   |             |             |              |               |             |  |
| Eastern....         | 25                 | 145                    | 23                | 31          | 54          | 36                | 24          | 60          | 7.3          | 1.3           | .....       | 74   |
| Yakima....          | 21                 | 311                    | 44                | 84          | 128         | 49                | 40          | 89          | 14.4         | 3.4           | .....       | 73   |

<sup>1</sup> Excluding interest on land.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 449.—Potatoes: Labor and material requirements per acre (461 records, 1919).

| Region.                    | Number of records. | Yield per acre. | Man labor.         |             |             | Horse labor.       |             |             | Seed.        | Ma-nure.     | Fer-tilizer.     | Percent of operating expense <sup>1</sup> covered by foregoing. |
|----------------------------|--------------------|-----------------|--------------------|-------------|-------------|--------------------|-------------|-------------|--------------|--------------|------------------|---|
|                            |                    |                 | Prior to har-vest. | Har-vest.   | Total.      | Prior to har-vest. | Har-vest.   | Total.      |              |              |                  |   |
| Minnesota:                 |                    | <i>Bush.</i>    | <i>Hrs.</i>        | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>        | <i>Hrs.</i> | <i>Hrs.</i> | <i>Bush.</i> | <i>Tons.</i> | <i>Lbs.</i>      |   |
| Clay County...             | 51                 | 103             | 18.3               | 2 10.9      | 2 29.2      | 46.1               | 19.6        | 65.7        | 12.3         | 2.3          | .....            | 74.5  |
| Anoka County...            | 54                 | 104             | 34.9               | 28.8        | 63.7        | 60.3               | 26.6        | 86.9        | 9.5          | 6.0          | .....            | 77.2  |
| Wisconsin:                 |                    |                 |                    |             |             |                    |             |             |              |              |                  |   |
| Barron County...           | 47                 | 152             | 47.6               | 45.1        | 92.7        | 61.5               | 38.8        | 100.3       | 11.6         | 7.1          | ( <sup>2</sup> ) | 80.6  |
| Waupaca County.....        | 50                 | 123             | 41.7               | 35.7        | 77.4        | 46.3               | 30.9        | 77.2        | 10.6         | 5.5          | .....            | 82.3  |
| Michigan:                  |                    |                 |                    |             |             |                    |             |             |              |              |                  |   |
| Montcalm County.....       | 49                 | 109             | 40.1               | 33.8        | 73.9        | 54.8               | 30.7        | 85.5        | 7.7          | 6.0          | ( <sup>2</sup> ) | 80.7  |
| Grand Traverse County..... | 52                 | 124             | 49.9               | 40.3        | 90.2        | 54.4               | 23.6        | 78.0        | 11.3         | 5.0          | .....            | 80.4  |
| New York:                  |                    |                 |                    |             |             |                    |             |             |              |              |                  |   |
| Steuben County...          | 50                 | 141             | 40.8               | 46.3        | 87.1        | 58.4               | 40.0        | 98.4        | 11.2         | 4.5          | ( <sup>2</sup> ) | 81.2  |
| Monroe County...           | 50                 | 110             | 47.9               | 37.7        | 85.6        | 76.5               | 39.5        | 116.0       | 13.2         | 7.1          | ( <sup>2</sup> ) | 81.2  |
| Maine:                     |                    |                 |                    |             |             |                    |             |             |              |              |                  |   |
| Aroostook County.....      | 58                 | 254             | 50.4               | 2 27.2      | 2 77.6      | 71.1               | 38.9        | 110.0       | 14.0         | 2.0          | 1,965            | 83.5  |

<sup>1</sup> Excluding interest on land.

<sup>2</sup> Picking not included in time for harvesting and total hours.

<sup>3</sup> Commercial fertilizers not generally used.

TABLE 450.—Sugar beets: Labor and material requirements per acre (1,320 records, 1914-1916).

| Region.                | Number of records. | Yield per acre. | Farmers' labor. |             | Contract labor. |                    | Total hours per acre. |        | Seed.       | Ma-nure.         | Fer-tilizer. | Per cent of operating expense <sup>1</sup> covered by foregoing. |
|------------------------|--------------------|-----------------|-----------------|-------------|-----------------|--------------------|-----------------------|--------|-------------|------------------|--------------|--|
|                        |                    |                 | Ma-chine.       | Hand.       | Cash per acre.  | Equi-valent hours. | Man.                  | Horse. |             |                  |              |  |
| California:            |                    | <i>Tons.</i>    | <i>Hrs.</i>     | <i>Hrs.</i> |                 |                    |                       |        | <i>Lbs.</i> | <i>Tons.</i>     | <i>Lbs.</i>  |  |
| Los Angeles...         | 81                 | 14.5            | 27.7            | .....       | \$15.01         | 60.0               | 87.7                  | 109.3  | 20.7        | ( <sup>2</sup> ) | .....        | 84   |
| Oxnard.....            | 45                 | 9.5             | 20.2            | .....       | 14.82           | 59.3               | 79.5                  | 111.5  | 16.6        | ( <sup>2</sup> ) | .....        | 85   |
| Salinas.....           | 39                 | 15.6            | 25.7            | .....       | 18.87           | 75.5               | 101.2                 | 124.3  | 14.6        | ( <sup>2</sup> ) | .....        | 86   |
| Utah-Idaho:            |                    |                 |                 |             |                 |                    |                       |        |             |                  |              |  |
| Garland.....           | 79                 | 14.8            | 36.7            | 21.2        | 18.87           | 75.4               | 133.5                 | 98.5   | 14.7        | 5.1              | .....        | 87   |
| Provo.....             | 58                 | 15.0            | 58.8            | 48.4        | 5.90            | 23.6               | 130.8                 | 117.1  | 14.9        | 7.0              | .....        | 86   |
| Idaho Falls....        | 36                 | 13.6            | 34.2            | 16.0        | 17.29           | 69.2               | 119.4                 | 79.3   | 14.7        | 6.3              | .....        | 83   |
| Colorado:              |                    |                 |                 |             |                 |                    |                       |        |             |                  |              |  |
| Greeley.....           | 195                | 15.6            | 48.5            | 6.3         | 17.26           | 69.1               | 123.9                 | 104.5  | 18.0        | 8.3              | .....        | 91   |
| Fort Morgan...         | 66                 | 13.6            | 45.3            | 18.7        | 13.52           | 54.1               | 118.1                 | 103.0  | 21.1        | 4.4              | .....        | 88   |
| Rocky Ford...          | 106                | 13.0            | 56.0            | 4.9         | 14.11           | 56.4               | 117.3                 | 132.7  | 21.7        | 3.6              | .....        | 90   |
| Montana:               |                    |                 |                 |             |                 |                    |                       |        |             |                  |              |  |
| Billings.....          | 305                | 10.8            | 41.8            | .....       | 18.64           | 93.2               | 136.0                 | 94.2   | 17.2        | 4.5              | .....        | 93   |
| Michigan-Ohio:         |                    |                 |                 |             |                 |                    |                       |        |             |                  |              |  |
| Caro.....              | 134                | 9.7             | 39.4            | 5.1         | 15.26           | 61.0               | 105.5                 | 80.0   | 15.6        | 2.0              | 92           | 90   |
| Alma.....              | 53                 | 11.4            | 50.3            | 10.3        | 13.55           | 54.2               | 114.8                 | 95.3   | 15.3        | 2.7              | 62           | 90   |
| Grand Rapids...        | 36                 | 10.2            | 45.3            | 15.4        | 12.66           | 50.6               | 111.3                 | 83.8   | 14.2        | 2.8              | 94           | 90   |
| Northwestern Ohio..... | 97                 | 13.2            | 38.6            | 5.8         | 17.24           | 69.0               | 113.4                 | 79.1   | 15.2        | ( <sup>2</sup> ) | 61           | 89   |

<sup>1</sup> Excluding interest on land.

<sup>2</sup> Manure applied on negligible number of farms.



## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 451.—*Tobacco: Labor and material requirements per acre.*

| Region.                           | Number of records. | Yield.     | Man labor.        |            |            | Horse labor.      |           |           | Ma-nure. | Per cent of operating expense covered by foregoing. |
|-----------------------------------|--------------------|------------|-------------------|------------|------------|-------------------|-----------|-----------|----------|---|
|                                   |                    |            | Prior to harvest. | Har-vest.  | Total.     | Prior to harvest. | Har-vest. | Total.    |          |   |
| Wisconsin.....                    | 19                 | Lbs. 1,300 | Hrs. 90.8         | Hrs. 104.3 | Hrs. 195.1 | Hrs. 65.5         | Hrs. 25.2 | Hrs. 90.7 | 8        | 77.8  |
| Kentucky (Burley) <sup>1</sup> .. | 81                 | 1,141      | 170.6             | 204.4      | 375.0      | 68.5              | 29.5      | 98.0      | .....    | 75  |
| Kentucky (dark) <sup>2</sup> .... | 70                 | 825        | 146.3             | 115.7      | 262.0      | 60.7              | 28.3      | 89.0      | .....    | 75  |

<sup>1</sup> Excluding interest on land.<sup>2</sup> See Kentucky Bulletin 229, "Cost of Producing Tobacco in Kentucky."TABLE 452.—*Field beans: Labor and material requirements per acre (166 records, 1917).*

| Region.              | Number of records. | Yield per acre. | Man labor.        |           |           | Horse labor.      |           |           | Seed.   | Ma-nure.  | Fertilizer. | Coal.   | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|----------------------|--------------------|-----------------|-------------------|-----------|-----------|-------------------|-----------|-----------|---------|-----------|-------------|---------|--|
|                      |                    |                 | Prior to harvest. | Har-vest. | Total.    | Prior to harvest. | Har-vest. | Total.    |         |           |             |         |  |
| New York.....        | 26                 | Bush. 10.9      | Hrs. 27.6         | Hrs. 14.3 | Hrs. 41.9 | Hrs. 53.3         | Hrs. 8.2  | Hrs. 61.5 | Lbs. 50 | Tons. 3.0 | Lbs. 95     | Lbs. 62 | 67   |
| Michigan.....        | 23                 | 10.5            | 27.0              | 12.4      | 39.4      | 42.9              | 7.1       | 50.0      | 40      | 1.3       | 30          | 80      | 67   |
| Wisconsin.....       | 16                 | 7.3             | 20.0              | 12.1      | 32.3      | 36.2              | 5.7       | 44.9      | 66      | 3.4       | 7           | 64      | 74   |
| Average.....         | .....              | .....           | 25.6              | 13.1      | 38.7      | 45.5              | 7.9       | 53.4      | .....   | .....     | .....       | .....   | .....  |
| California (irr.)... | 15                 | 20.7            | 20.0              | 17.5      | 37.5      | 37.9              | 11.3      | 49.2      | 9-26    | 3.0       | * 13.3      | .....   | 62   |
| Colorado (irr.)....  | 16                 | 25.0            | 27.9              | 18.4      | 46.3      | 55.5              | 12.0      | 67.5      | 30      | .4        | .....       | 124     | 68   |
| Average.....         | .....              | .....           | 24.1              | 17.9      | 42.0      | 40.9              | 11.7      | 58.6      | .....   | .....     | .....       | .....   | .....  |
| Colorado (dry)....   | 17                 | 6.8             | 15.3              | 10.5      | 25.8      | 31.4              | 8.1       | 39.5      | 15      | .....     | .....       | 56      | 73   |
| New Mexico (dry)     | 23                 | 4.1             | 17.3              | 10.8      | 28.1      | 33.6              | 6.3       | 39.9      | 17      | .....     | * 2.5       | .....   | 83   |
| Average.....         | .....              | .....           | 16.4              | 10.7      | 27.1      | 32.6              | 7.1       | 39.7      | .....   | .....     | .....       | .....   | .....  |
| California (dry)...  | 15                 | 26.5            | 25.0              | 9.0       | 34.0      | 71.3              | 6.7       | 78.0      | 81      | .....     | * 15.9      | .....   | 60   |
| Idaho (dry).....     | 15                 | 9.7             | 21.3              | 8.9       | 30.2      | 42.0              | 7.0       | 49.0      | 20-27   | .....     | * 3.7       | .....   | 79   |
| Average.....         | .....              | .....           | 23.2              | 9.0       | 32.2      | 56.7              | 6.8       | 63.5      | .....   | .....     | .....       | .....   | .....  |

<sup>1</sup> Excluding interest on land.<sup>2</sup> Sacks.TABLE 453.—*Kafir and milo: Labor and material requirements per acre (96 records, 1917).*

| Region.       | Number of records. | Yield per acre. | Man labor.        |           |           | Horse labor.      |           |           | Seed.    | Ma-nure. | Twine.   | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|---------------|--------------------|-----------------|-------------------|-----------|-----------|-------------------|-----------|-----------|----------|----------|----------|--|
|               |                    |                 | Prior to harvest. | Har-vest. | Total.    | Prior to harvest. | Har-vest. | Total.    |          |          |          |  |
| Texas.....*   | 40                 | Bush. 20.8      | Hrs. 9.7          | Hrs. 6.7  | Hrs. 16.4 | Hrs. 29.5         | Hrs. 8.8  | Hrs. 38.3 | Lbs. 3.8 | .....    | Lbs. 0.5 | 67   |
| Oklahoma..... | 37                 | 22.6            | 8.8               | 10.0      | 18.8      | 25.6              | 12.8      | 38.4      | 3.0      | 2.0      | 1.3      | 77   |
| Kansas.....   | 19                 | 23.2            | 11.4              | 12.9      | 24.3      | 26.4              | 15.4      | 41.8      | 5.1      | 5.3      | 3.6      | 78   |

<sup>1</sup> Excluding interest on land.

LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 454.—Wheat: Labor and material requirements per acre (481 records, 1919).

| Region.              | Number of records. | Yield per acre. | Man labor.        |          |        | Horse labor.      |          |        | Seed. | Twine. | Per cent of operating expense covered by foregoing. |
|----------------------|--------------------|-----------------|-------------------|----------|--------|-------------------|----------|--------|-------|--------|---|
|                      |                    |                 | Prior to harvest. | Harvest. | Total. | Prior to harvest. | Harvest. | Total. |       |        |   |
| Spring wheat region: |                    | Bush.           | Hrs.              | Hrs.     | Hrs.   | Hrs.              | Hrs.     | Hrs.   | Bush. | Lbs.   |   |
| Grand Forks, N. D.   | 39                 | 9.8             | 3.6               | 2.2      | 5.8    | 14.6              | 4.6      | 19.2   | 1.4   | 1.9    | 59  |
| Morton, N. D.        | 39                 | 4.4             | 5.4               | 3.8      | 9.2    | 19.6              | 6.1      | 25.7   | 1.2   | .1     | 68  |
| Spink, S. D.         | 39                 | 9.9             | 3.1               | 3.0      | 6.1    | 14.8              | 5.3      | 20.1   | 1.2   | 1.5    | 62  |
| Clay, Minn.          | 38                 | 8.1             | 4.2               | 4.0      | 8.2    | 15.1              | 7.3      | 22.4   | 1.4   | 2.2    | 67  |
| Traverse, Minn.      | 42                 | 8.4             | 4.1               | 4.7      | 8.8    | 17.3              | 8.4      | 25.7   | 1.4   | 2.0    | 72  |
| Winter wheat region: |                    |                 |                   |          |        |                   |          |        |       |        |   |
| Ford, Kans.          | 32                 | 13.3            | 2.8               | 4.8      | 7.6    | 12.0              | 8.8      | 20.8   | .8    | 1.2    | 63  |
| Pawnee, Kans.        | 32                 | 13.9            | 2.6               | 4.7      | 7.3    | 11.7              | 8.0      | 19.7   | 1.0   | .5     | 56  |
| McPherson, Kans.     | 35                 | 12.7            | 4.5               | 4.8      | 9.3    | 18.8              | 8.1      | 26.9   | 1.1   | 2.7    | 63  |
| Saline, Mo.          | 29                 | 15.3            | 5.1               | 8.1      | 13.2   | 18.5              | 11.1     | 29.6   | 1.3   | 2.8    | 63  |
| Jasper, Mo.          | 30                 | 19.2            | 8.1               | 9.4      | 17.5   | 26.8              | 12.7     | 39.5   | 1.2   | 2.3    | 75  |
| St. Charles, Mo.     | 38                 | 19.6            | 8.2               | 8.9      | 17.1   | 25.1              | 11.5     | 36.6   | 1.1   | 2.3    | 68  |
| Phelps, Nebr.        | 30                 | 10.8            | 3.7               | 5.5      | 9.2    | 13.0              | 8.6      | 21.6   | 1.0   | 2.7    | 69  |
| Saline, Nebr.        | 35                 | 18.1            | 6.7               | 8.1      | 14.8   | 24.7              | 12.4     | 37.1   | 1.4   | 3.7    | 71  |
| Keith, Nebr.         | 23                 | 18.1            | 2.7               | 6.9      | 9.6    | 9.3               | 10.1     | 19.4   | .9    | 1.8    | 50  |

<sup>1</sup> Excluding interest on land.

TABLE 455.<sup>1</sup>—Labor and material requirements, winter wheat, 1920 (representing pre-dominating practice in each region).

[453 records.]

| Regions.             | Man hours.               |          |        | Horse hours.             |          |        | Seed.    | Twine.  | Land value. |
|----------------------|--------------------------|----------|--------|--------------------------|----------|--------|----------|---------|-------------|
|                      | Preparation and seeding. | Harvest. | Total. | Preparation and seeding. | Harvest. | Total. |          |         |             |
| Missouri:            |                          |          |        |                          |          |        | Bushels. | Pounds. |             |
| Pike County.....     | 7.4                      | 7.1      | 14.5   | 24.6                     | 9.6      | 34.2   | 1.30     | 1.5     | \$122       |
| Carroll County.....  | 7.3                      | 9.3      | 16.6   | 26.1                     | 18.0     | 39.1   | 1.23     | 2.2     | 219         |
| Nebraska:            |                          |          |        |                          |          |        |          |         |             |
| Gage County.....     | 5.4                      | 8.0      | 13.4   | 21.8                     | 11.9     | 33.7   | 1.28     | 2.4     | 208         |
| Clay County.....     | 4.3                      | 5.5      | 9.8    | 18.8                     | 9.5      | 27.3   | 1.21     | 2.4     | 171         |
| Cheyenne County..... | 3.4                      | 5.2      | 8.6    | 14.0                     | 9.3      | 23.8   | .77      | 2.2     | 108         |
| Kansas:              |                          |          |        |                          |          |        |          |         |             |
| Thomas County—       |                          |          |        |                          |          |        |          |         |             |
| Seeded.....          | 1.9                      | 4.6      | 6.5    | 8.1                      | 8.3      | 16.4   | .74      | .....   | 61          |
| Vol.....             | .7                       | 4.6      | 5.3    | 3.2                      | 8.3      | 11.5   |          |         |             |
| McPherson County—    |                          |          |        |                          |          |        |          |         |             |
| Shock thrashed.....  | 4.5                      | 4.0      | 8.5    | 18.5                     | 7.5      | 26.0   | 1.06     | 2.0     | 140         |
| Stack thrashed.....  | 4.5                      | 5.0      | 9.5    | 18.5                     | 8.1      | 26.6   |          |         |             |
| Pawnee County.....   | 2.2                      | 4.4      | 6.6    | 10.6                     | 7.2      | 17.8   | .94      | .....   | 89          |
| Oklahoma:            |                          |          |        |                          |          |        |          |         |             |
| Garfield County..... | 4.9                      | 4.3      | 9.2    | 20.1                     | 6.9      | 27.0   | 1.07     | 2.5     | 120         |
| Woodward County..... | 3.8                      | 4.2      | 8.0    | 14.4                     | 8.3      | 22.7   | .87      | .....   | 44          |

<sup>1</sup> From preliminary report on the cost of producing wheat.

## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 456.—*Oats: Labor and material requirements per acre (301 records)*

| Region.           | Number of records. | Yield per acre. | Man labor.        |          |        | Horse labor.      |          |        | Seed per acre. | Fertilizer. | Fuel (coal). | Twine per acre. | Per cent of operating expense covered by foregoing. |
|-------------------|--------------------|-----------------|-------------------|----------|--------|-------------------|----------|--------|----------------|-------------|--------------|-----------------|---|
|                   |                    |                 | Prior to harvest. | Harvest. | Total. | Prior to harvest. | Harvest. | Total. |                |             |              |                 |   |
| Minnesota.....    | 79                 | Bush.           | Hrs.              | Hrs.     | Hrs.   | Hrs.              | Hrs.     | Hrs.   | Bush.          | Lbs.        | Lbs.         | Lbs.            | 71  |
| Wisconsin.....    | 92                 | 35.4            | 4.2               | 5.9      | 10.1   | 15.7              | 7.8      | 23.5   | 2.6            | .....       | .....        | 2.3             | 71  |
| New York.....     | 9                  | 35.7            | 6.0               | 9.0      | 15.0   | 16.3              | 7.7      | 24.0   | 2.2            | .....       | 48.9         | 2.5             | 70  |
| Ohio.....         | 30                 | 60.4            | 8.3               | 10.5     | 18.8   | 18.0              | 7.6      | 25.6   | 2.4            | 192.1       | 69.5         | 2.6             | 71  |
| Illinois.....     | 38                 | 34.3            | 9.0               | 11.5     | 20.5   | 19.4              | 8.4      | 27.8   | 2.3            | .....       | 49.5         | 2.2             | 71  |
| North Dakota..... | 53                 | 35.3            | 2.7               | 6.1      | 8.8    | 9.2               | 8.4      | 17.6   | 2.4            | .....       | 43.8         | 2.1             | 61  |
|                   |                    | 33.0            | 2.9               | 2.7      | 5.6    | 13.0              | 4.4      | 17.4   | 2.0            | .....       | .....        | 1.9             | 59  |

<sup>1</sup> Excluding interest on land.TABLE 457.—*Barley: Labor and material requirements per acre (154 records).*

| Region.           | Number of records. | Yield per acre. | Man labor.        |          |        | Horse labor.      |          |        | Seed. | Fertilizer. | Fuel (coal). | Twine. | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|-------------------|--------------------|-----------------|-------------------|----------|--------|-------------------|----------|--------|-------|-------------|--------------|--------|--|
|                   |                    |                 | Prior to harvest. | Harvest. | Total. | Prior to harvest. | Harvest. | Total. |       |             |              |        |  |
| Minnesota.....    | 61                 | Bush.           | Hrs.              | Hrs.     | Hrs.   | Hrs.              | Hrs.     | Hrs.   | Bush. | Lbs.        | Lbs.         | Lbs.   | 73   |
| Wisconsin.....    | 37                 | 23.8            | 4.7               | 6.0      | 10.7   | 17.3              | 7.8      | 25.1   | 2.0   | .....       | .....        | 2.3    | 75   |
| New York.....     | 9                  | 27.3            | 6.4               | 10.5     | 16.9   | 18.6              | 8.7      | 27.3   | 1.7   | .....       | 49.7         | 2.2    | 75   |
| North Dakota..... | 47                 | 32.4            | 6.9               | 9.6      | 16.5   | 14.6              | 7.8      | 22.4   | 2.1   | 195.0       | 77.6         | 2.7    | 75   |
|                   |                    | 20.7            | 2.8               | 2.2      | 5.0    | 13.1              | 4.0      | 17.1   | 1.8   | .....       | .....        | 1.8    | 59   |

<sup>1</sup> Excluding interest on land.TABLE 458.—*Rye: Labor and material requirements per acre.*

| Region.         | Number of records. | Yield per acre. | Man labor.        |          |        | Horse labor.      |          |        | Seed. | Fertilizer. | Fuel (coal). | Twine. | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|-----------------|--------------------|-----------------|-------------------|----------|--------|-------------------|----------|--------|-------|-------------|--------------|--------|--|
|                 |                    |                 | Prior to harvest. | Harvest. | Total. | Prior to harvest. | Harvest. | Total. |       |             |              |        |  |
| Minnesota.....  | 6                  | Bush.           | Hrs.              | Hrs.     | Hrs.   | Hrs.              | Hrs.     | Hrs.   | Bush. | Lbs.        | Lbs.         | Lbs.   | 76   |
| Wisconsin.....  | 12                 | 22.3            | 2.8               | 7.4      | 10.2   | 8.0               | 7.9      | 15.9   | 2.0   | .....       | .....        | 3.1    | 76   |
| Ohio.....       | 10                 | 16.2            | 4.5               | 9.9      | 14.4   | 12.3              | 8.5      | 20.8   | 1.1   | .....       | 49.0         | 1.9    | 73   |
|                 |                    | 14.6            | 6.0               | 10.4     | 16.4   | 11.9              | 7.5      | 19.4   | 1.9   | .....       | 48.0         | 2.0    | 67   |
| New York.....   | (2)                | 17.0            | 9.9               | 13.4     | 23.3   | 21.2              | 7.1      | 28.3   | 1.9   | 183.0       | 0.8          | 4.0    | 76   |
| New Jersey..... | (2)                | 17.6            | 10.0              | 11.4     | 21.4   | 22.7              | 5.4      | 28.1   | 1.8   | 337.0       | .....        | 2.8    | 74   |

<sup>1</sup> Excluding interest on land.<sup>2</sup> Figures taken from the results of a special investigation.TABLE 459.—*Mixed tame hay: Labor and material requirements per acre (197 records).*

| Region.           | Number of records. | Yield per acre. | Man labor: Mowing, raking, and hauling. | Horse labor: Mowing, raking, and hauling. | Seed.    |         | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|-------------------|--------------------|-----------------|---|---|----------|---------|--|
|                   |                    |                 |   |   | Timothy. | Clover. |  |
|                   |                    | Tons.           | Hours.                                  | Hours.                                    | Pounds.  | Pounds. |  |
| Minnesota.....    | 11                 | 1.5             | 7.8                                     | 10.1                                      | 4.6      | 4.0     | 74   |
| Wisconsin.....    | 65                 | 1.4             | 9.1                                     | 10.2                                      | 4.6      | 3.8     | 70   |
| New York.....     | 23                 | 1.4             | 7.9                                     | 7.7                                       | 9.2      | 4.9     | 82   |
| Pennsylvania..... | 37                 | 1.5             | 7.5                                     | 7.8                                       | 9.1      | 10.5    | 80   |
| Ohio.....         | 52                 | 1.4             | 7.9                                     | 8.5                                       | .....    | .....   | 71   |
| New England.....  | 9                  | 1.6             | 10.7                                    | 9.5                                       | 10.0     | * 12.0  | 77   |

<sup>1</sup> Excluding interest on land.<sup>2</sup> Timothy and redtop.

## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 460.—Clover hay: Labor and material requirements per acre (99 records).

| Region.        | Number of records. | Yield per acre. | Man labor: Mowing, raking, and hauling. | Horse labor: Mowing, raking, and hauling. | Seed.          | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|----------------|--------------------|-----------------|---|---|----------------|--|
|                |                    | <i>Tons.</i>    | <i>Hours.</i>                           | <i>Hours.</i>                             | <i>Pounds.</i> |  |
| Minnesota..... | 31                 | 1.5             | 8.6                                     | 12.4                                      | 10.7           | 79   |
| Wisconsin..... | 37                 | 2.2             | 14.2                                    | 15.5                                      | 7.2            | 79   |
| New York.....  | 7                  | 2.0             | 8.9                                     | 9.9                                       | 10.1           | 80   |
| Ohio.....      | 20                 | 1.6             | 11.6                                    | 10.5                                      | -----          | 76   |
| Illinois.....  | 4                  | 1.3             | 8.7                                     | 10.0                                      | 7.2            | -----  |

<sup>1</sup> Excluding interest on land.

TABLE 461.—Timothy hay: Labor and material requirements per acre (49 records).

| Region.        | Number of records. | Yield per acre. | Man labor: Mowing, raking, and hauling. | Horse labor: Mowing, raking, and hauling. | Seed.          | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|----------------|--------------------|-----------------|---|---|----------------|--|
|                |                    | <i>Tons.</i>    | <i>Hours.</i>                           | <i>Hours.</i>                             | <i>Pounds.</i> |  |
| Minnesota..... | 13                 | 1.3             | 8.0                                     | 11.4                                      | 5.4            | 80   |
| Wisconsin..... | 21                 | 1.4             | 9.1                                     | 11.0                                      | 5.5            | 82   |
| Ohio.....      | 8                  | 1.2             | 7.9                                     | 9.2                                       | -----          | 75   |
| Iowa.....      | 7                  | 1.8             | 7.5                                     | 8.8                                       | 4.0            | 70   |

<sup>1</sup> Excluding interest on land.

TABLE 462.—Alfalfa: Labor and material requirements per acre (105 records).

| Region.        | Number of records. | Yield per acre. | Man labor: Mowing, raking, and hauling. | Horse labor: Mowing, raking, and hauling. | Seed.          | Per cent of operating expense covered by foregoing. <sup>1</sup> | Part of acreage cut more than once. |                  |
|----------------|--------------------|-----------------|---|---|----------------|--|-------------------------------------|------------------|
|                |                    |                 |   |   |                |  | Two times.                          | Three times.     |
|                |                    | <i>Tons.</i>    | <i>Hours.</i>                           | <i>Hours.</i>                             | <i>Pounds.</i> |  | <i>Per cent.</i>                    | <i>Per cent.</i> |
| Minnesota..... | 37                 | 2.5             | 20.2                                    | 24.1                                      | 11.7           | 73   | 80                                  | 60               |
| Wisconsin..... | 39                 | 2.4             | 21.8                                    | 21.2                                      | 18.0           | 72   | 93                                  | 59               |
| Iowa.....      | 7                  | 2.0             | 14.0                                    | 22.4                                      | 15.0           | 69   | 100                                 | 72               |
| Illinois.....  | 3                  | 1.9             | 19.2                                    | 23.7                                      | 13.7           | 63   | -----                               | -----            |
| Ohio.....      | 7                  | 1.8             | 17.4                                    | 13.8                                      | -----          | 67   | 86                                  | 58               |
| New York.....  | 12                 | 2.2             | 14.4                                    | 16.0                                      | 15.3           | 69   | 91                                  | 64               |

<sup>1</sup> Excluding interest on land.

TABLE 463.—Wild and grain hays: Labor and material requirements per acre (83 records).

| Region.           | Kind of hay. | Number of records. | Yield per acre. | Man labor.        |             |             | Horse labor.      |             |             | Seed.       | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|-------------------|--------------|--------------------|-----------------|-------------------|-------------|-------------|-------------------|-------------|-------------|-------------|--|
|                   |              |                    |                 | Prior to harvest. | Harvest.    | Total.      | Prior to harvest. | Harvest.    | Total.      |             |  |
|                   |              |                    | <i>Tons.</i>    | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Lbs.</i> |  |
| Minnesota.....    | Wild.....    | 52                 | 1.3             | -----             | 7.6         | 7.6         | -----             | 10.9        | 10.9        | -----       | 46   |
| Do.....           | Millet.....  | 8                  | 1.7             | 6.9               | 11.3        | 18.2        | 23.2              | 12.7        | 35.9        | 35.9        | 69   |
| North Dakota..... | do.....      | 5                  | 1.9             | 3.2               | 5.1         | 8.3         | 14.3              | 8.1         | 22.4        | 21.0        | 83   |
| Wisconsin.....    | Grain.....   | 8                  | 1.2             | 8.1               | 8.5         | 16.6        | 16.4              | 8.1         | 24.5        | 75.0        | 80   |
| Illinois.....     | do.....      | 2                  | 1.5             | 3.1               | 3.4         | 6.5         | 8.1               | 5.5         | 13.6        | 42.0        | -----  |
| Minnesota.....    | do.....      | 8                  | 1.3             | 2.9               | 8.3         | 11.2        | 8.9               | 9.8         | 18.7        | 70.4        | -----  |

<sup>1</sup> Excluding interest on land.

## LABOR AND MATERIAL REQUIRED PER ACRE FOR DIFFERENT CROPS—Continued.

TABLE 464.—*Timothy seed: Labor and material requirements per acre.*

| Region.        | Number of records. | Yield per acre. | Man labor.    |               | Horse labor.  |               | Seed.       | Twine.      | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|----------------|--------------------|-----------------|---------------|---------------|---------------|---------------|-------------|-------------|--|
|                |                    |                 | Harvest.      | Total.        | Harvest.      | Total.        |             |             |  |
|                |                    | <i>Bushels.</i> | <i>Hours.</i> | <i>Hours.</i> | <i>Hours.</i> | <i>Hours.</i> | <i>Lbs.</i> | <i>Lbs.</i> |  |
| Minnesota..... | 12                 | 4.0             | 6.3           | 6.3           | 7.6           | 7.6           | 5.6         | 1.9         | 45   |
| Wisconsin..... | 4                  | 1.7             | 3.9           | 3.9           | 4.4           | 4.4           | 4.6         | .8          | 62   |
| Iowa.....      | 10                 | 5.8             | 6.9           | 6.9           | 7.6           | 7.6           | 4.0         | 3.1         | 49   |
| Ohio.....      | 3                  | 1.7             | 6.0           | 6.0           | 5.0           | 5.0           | .....       | .....       | 64   |
| New York.....  | .....              | 6.3             | 10.0          | 10.0          | 8.9           | 8.9           | .....       | .....       | .....  |

<sup>1</sup> Excluding interest on land.TABLE 465.—*Clover seed: Labor and material requirements per acre.*

| Region.        | Number of records. | Yield per acre. | Man labor.  |             | Horse labor. |             | Seed.       | Per cent of operating expense covered by foregoing. <sup>1</sup> |
|----------------|--------------------|-----------------|-------------|-------------|--------------|-------------|-------------|--|
|                |                    |                 | Harvest.    | Total.      | Harvest.     | Total.      |             |  |
|                |                    | <i>Bush.</i>    | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>  | <i>Hrs.</i> | <i>Lbs.</i> |  |
| Minnesota..... | 8                  | 0.9             | 5.3         | 5.3         | 7.2          | 7.2         | 10.7        | 56   |
| Wisconsin..... | 17                 | 1.6             | 8.9         | 8.9         | 7.0          | 7.0         | 10.3        | 40   |
| Ohio.....      | 19                 | 1.0             | 6.0         | 6.0         | 5.3          | 5.3         | .....       | 53   |
| Illinois.....  | 2                  | .7              | 8.5         | 8.5         | 11.9         | 11.9        | 6.6         | 55   |

<sup>1</sup> Excluding interest on land.TABLE 466.—*Apples: Labor and material requirements per acre (642 records).*

| Region.                    | Number of records. | Year.       | Man labor.        |             |             | Horse labor.      |              |             | Spraying.    |                 |                         |                 |           | Part of operating expense covered by foregoing. <sup>1</sup> | Yield per acre. <sup>2</sup> | Average land value per acre. |
|----------------------------|--------------------|-------------|-------------------|-------------|-------------|-------------------|--------------|-------------|--------------|-----------------|-------------------------|-----------------|-----------|--|------------------------------|------------------------------|
|                            |                    |             | Prior to harvest. | Harvest.    | Total.      | Prior to harvest. | Harvest.     | Total.      | Manure.      | Fertilizer.     | Dormant spray solution. | Other sprays.   |           |  |                              |                              |
|                            |                    |             |                   |             |             |                   |              |             |              |                 |                         | Number.         | Solution. |  |                              |                              |
|                            |                    |             |                   |             |             |                   |              |             |              |                 |                         |                 |           |  |                              |                              |
| <i>Hrs.</i>                | <i>Hrs.</i>        | <i>Hrs.</i> | <i>Hrs.</i>       | <i>Hrs.</i> | <i>Hrs.</i> | <i>Hrs.</i>       | <i>Tons.</i> | <i>Lbs.</i> | <i>Gals.</i> | <i>P' cent.</i> | <i>Gals.</i>            | <i>P' cent.</i> |           |  |                              |                              |
| Wenatchee Valley, Wash     | 87                 | 1914        | 230               | 364         | 594         | 96                | 62           | 158         | 2.2          | .....           | 467                     | 2.4             | 1,185     | 89   | 593                          | \$1,925                      |
| Yakima Valley, Wash....    | 120                | 1915        | 214               | 300         | 514         | 81                | 59           | 150         | 4.7          | .....           | 430                     | 4.0             | 1,619     | 89   | 482                          | 1,080                        |
| Hood River, Oreg. ....     | 54                 | 1915        | 142               | 164         | 306         | 32                | 33           | 115         | 1.5          | .....           | 222                     | 4.8             | 1,040     | 82   | 232                          | 991                          |
| Payette Valley, Idaho..... | 38                 | 1915        | 177               | 235         | 412         | 72                | 41           | 113         | 4.0          | .....           | 389                     | 3.1             | 1,155     | 93   | 337                          | 613                          |
| Western Colorado.....      | 125                | 1914-15     | 161               | 191         | 352         | 76                | 47           | 123         | 3.5          | .....           | 353                     | 4.0             | 2,020     | 89   | 284                          | 653                          |
| Western New York.....      | 218                | 1915        | 77                | 93          | 170         | 63                | 27           | 90          | 4.8          | 177             | 264                     | 2.3             | 620       | 91   | 84                           | 514                          |

<sup>1</sup> Per cent that man and horse labor, manure, fertilizer, spray materials and containers are of operating expense, exclusive of land rent.<sup>2</sup> The average yield represents the yield over a five or six year period.<sup>3</sup> To reduce to boxes, multiply by 3.



|   |      |       |      |      |      |     |       |     |      |                   |      |       |       |       |      |     |
|---|------|-------|------|------|------|-----|-------|-----|------|-------------------|------|-------|-------|-------|------|-----|
| Virginia <sup>1</sup> .....                 | 1917 | 11 12 | 27.9 | 31.7 | 50.6 | .9  | 11.1  | 1.2 | 10.7 | ( <sup>10</sup> ) | 16.5 | 35.76 | 7.64  | 28.12 | 52.0 | .45 |
| .....                                       | 1921 |       | 28.7 | 28.9 | 52.6 | .7  | 1.4   | 1.0 | 9.8  | ( <sup>10</sup> ) | 23.7 | 34.88 | 4.40  | 30.46 | 40.0 | .76 |
| Maryland <sup>2</sup> .....                 | 1917 | 11 12 | 30.5 | 26.1 | 56.6 | .6  | 13.7  | 1.0 | 9.8  | ( <sup>10</sup> ) | 18.2 | 48.85 | 10.64 | 38.21 | 60.0 | .64 |
| .....                                       | 1921 |       | 30.2 | 24.0 | 51.3 | .6  | ..... | 1.3 | 10.4 | ( <sup>10</sup> ) | 22.2 | 45.36 | 6.95  | 32.41 | 62.0 | .64 |
| Pennsylvania <sup>3</sup> .....             | 1917 | 11 22 | 25.7 | 25.3 | 51.0 | .6  | 16.4  | 1.3 | 9.2  | ( <sup>10</sup> ) | 21.4 | 47.00 | 14.79 | 32.21 | 62.0 | .52 |
| .....                                       | 1921 |       | 24.8 | 17.3 | 42.1 | .5  | ..... | 1.0 | 9.1  | ( <sup>10</sup> ) | 20.7 | 46.72 | 8.47  | 38.27 | 65.0 | .59 |
| Delaware <sup>4</sup> .....                 | 1917 | 11 25 | 30.8 | 23.9 | 54.7 | 1.0 | 20.3  | 1.3 | 9.7  | ( <sup>10</sup> ) | 13.0 | 47.95 | 8.03  | 39.82 | 47.0 | .85 |
| .....                                       | 1921 |       | 28.8 | 17.9 | 46.7 | .7  | 2.2   | 1.1 | 10.2 | ( <sup>10</sup> ) | 13.8 | 43.48 | 4.13  | 39.36 | 50.0 | .79 |
| Average, eastern section <sup>5</sup> ..... | 1917 | 11 84 | 29.3 | 26.4 | 55.7 | .8  | 14.5  | 1.1 | 9.9  | ( <sup>10</sup> ) | 13.0 | 44.83 | 9.34  | 35.54 | 53.0 | .67 |
| .....                                       | 1921 |       | 28.6 | 20.0 | 48.6 | .6  | 1.3   | .9  | 10.2 | ( <sup>10</sup> ) | 24.2 | 42.31 | 5.42  | 36.89 | 55.0 | .67 |

<sup>1</sup> New York Department of Agriculture Bul. 38.<sup>2</sup> U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.<sup>3</sup> Husked from standing stalks.<sup>4</sup> Minnesota Bul. 145.<sup>5</sup> Minnesota Bul. 179.<sup>6</sup> Unpublished data in files of U. S. Department of Agriculture.<sup>7</sup> Missouri Bul. 125.<sup>8</sup> U. S. Department of Agriculture Bul. 651.<sup>9</sup> U. S. Department of Agriculture Bul. 648.<sup>10</sup> Overhead included in equipment.<sup>11</sup> Cut and harvested from stock.

NOTE.—The Crop Reporter for April, 1911, gives the results of an investigation on the cost of producing corn, which data have not been used in the above tabulation.

TABLE 468.—Acre costs of production of cotton, with yield per acre and percentage analysis of cost factors.

| Region.                  | Date. | Basin.         | Labor.       | Anti-<br>mural<br>power. | Labor<br>power. | Seed.        | Ma-<br>ture. | Per-<br>til-<br>zer. | Sacks<br>and<br>sheets. | Insur-<br>ance<br>and<br>taxes. | Equip-<br>ment. | Over-<br>head. | Gin-<br>ning. | Land<br>charge. | Total<br>cost. | Cred-<br>its. | Net<br>cost. | Yield,<br>lint. | Net<br>cost<br>per<br>lb. |
|--------------------------|-------|----------------|--------------|--------------------------|-----------------|--------------|--------------|----------------------|-------------------------|---------------------------------|-----------------|----------------|---------------|-----------------|----------------|---------------|--------------|-----------------|---------------------------|
| Georgia:                 |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Laurens 1.....           | 1918  | 3,963.0 acres. | Per<br>cent. | Per<br>cent.             | Per<br>cent.    | Per<br>cent. | Per<br>cent. | Per<br>cent.         | Per<br>cent.            | Per<br>cent.                    | Per<br>cent.    | Per<br>cent.   | Per<br>cent.  | Per<br>cent.    | \$74.99        | \$15.55       | \$59.44      | 172             | \$0.214                   |
| Greene County 1.....     | 1918  | 4,147.5 acres. | 60.1         | 9.6                      | 69.7            | 1.7          | 0.1          | 5.1                  | 0.3                     | 0.4                             | 2.3             | 7.7            | 2.9           | 9.8             | 74.07          | 15.81         | 58.26        | 260             | .224                      |
| Sumter County 1.....     | 1918  | 58.6           | 58.6         | 9.7                      | 68.3            | 2.4          | .5           | 5.6                  | .2                      | .2                              | 2.2             | 7.7            | 2.8           | 10.1            | 63.43          | 15.35         | 48.08        | 244             | .197                      |
| Brooks County 1.....     | 1914  | 4,188.5 acres. | 51.7         | 12.1                     | 63.8            | 3.2          | .7           | 7.8                  | .3                      | .4                              | 2.6             | 7.6            | 3.0           | 10.6            | 26.10          | .....         | .....        | 273             | .....                     |
| Upland cotton 1.....     | 1914  | 53 records.    | 51.8         | 16.2                     | 68.0            | 1.6          | .8           | 12.2                 | .....                   | .....                           | 3.5             | .....          | 4.8           | 11.5            | 34.16          | .....         | .....        | 316             | .108                      |
| Sea Island cotton 1..... | 1914  | 91 records.    | 51.8         | 16.2                     | 68.0            | 1.3          | .....        | 13.9                 | .....                   | .....                           | 3.1             | .....          | 4.8           | 8.9             | 34.16          | .....         | .....        | 316             | .108                      |
| Alabama:                 |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Tallapoosa County 1..... | 1918  | 1,169.0 acres. | 66.0         | 9.9                      | 75.9            | 2.2          | .4           | 4.3                  | .3                      | .2                              | 2.2             | 8.3            | 1.9           | 4.3             | 71.86          | 10.31         | 61.55        | 172             | .357                      |
| Marshall County 1.....   | 1918  | 1,249.5 acres. | 56.9         | 8.0                      | 64.9            | 1.9          | 2.1          | 7.2                  | .3                      | .3                              | 3.0             | 7.7            | 2.2           | 10.4            | 89.14          | 13.72         | 75.42        | 227             | .352                      |
| Dale County 1.....       | 1918  | 1,228.5 acres. | 60.9         | 9.5                      | 70.4            | 2.5          | .6           | 5.3                  | .4                      | .3                              | 2.4             | 7.9            | 2.4           | 7.8             | 67.28          | 13.17         | 54.11        | 194             | .279                      |
| South Carolina:          |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Anderson County 1.....   | 1918  | 2,895.5 acres. | 54.3         | 8.5                      | 62.8            | 2.1          | .6           | 7.4                  | .2                      | .4                              | 1.9             | 7.3            | 2.5           | 14.8            | 79.88          | 14.80         | 65.08        | 248             | .282                      |
| Barrow County 1.....     | 1918  | 3,935.5 acres. | 62.0         | 9.4                      | 61.4            | 1.9          | .6           | 14.1                 | .3                      | .2                              | 2.1             | 7.8            | 2.6           | 9.0             | 79.79          | 14.13         | 65.66        | 248             | .245                      |
| Anderson County 1.....   | 1914  | 4,480.0 acres. | 41.7         | 20.5                     | 62.2            | 1.6          | .....        | 16.2                 | .....                   | .....                           | 2.9             | 2.7            | .....         | 14.4            | 23.03          | .....         | .....        | 233             | .....                     |
| Orangeburg County 1..... | 1915  | 253 records.   | 53.6         | 1.5                      | 53.6            | 1.5          | 3.1          | 15.7                 | .....                   | .....                           | 2.5             | .....          | 4.2           | 14.4            | 34.72          | .....         | .....        | 310             | .....                     |
| Texas:                   |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Ellis County 1.....      | 1918  | 8,148.0 acres. | 38.1         | 9.6                      | 47.7            | 2.5          | .....        | .....                | .1                      | .9                              | 3.2             | 5.0            | 4.0           | 36.6            | 46.01          | 9.78          | 36.23        | 176             | .205                      |
| Rusk County 1.....       | 1918  | 2,593.0 acres. | 56.9         | 11.4                     | 68.3            | 2.2          | .....        | 4.1                  | .5                      | .6                              | 3.3             | 7.5            | 3.5           | 10.0            | 51.55          | 10.19         | 41.36        | 185             | .223                      |
| Ellis County 1.....      | 1914  | 114 records.   | 45.0         | 20.0                     | 65.0            | 2.2          | .....        | .....                | .....                   | .....                           | 3.3             | .....          | 6.3           | 22.4            | 22.31          | .....         | .....        | 241             | .....                     |
| Mississippi:             |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Coahoma County 1.....    | 1914  | 91 records.    | 67.4         | 1.4                      | 67.4            | 1.4          | .....        | .....                | .....                   | .....                           | 2.7             | .....          | 6.5           | 22.0            | 33.92          | .....         | .....        | 346             | .....                     |
| Do. 1.....               | 1914  | 34 records.    | 68.4         | 1.3                      | 68.4            | 1.3          | .....        | 1.9                  | .....                   | .....                           | 2.4             | .....          | 5.8           | 20.2            | 37.41          | .....         | .....        | 318             | .....                     |
| Oklahoma:                |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Payne County 1.....      | 1914  | 23 records.    | .....        | .....                    | 80.9            | 1.6          | .....        | .....                | .....                   | .....                           | 3.3             | .....          | 5.8           | 8.4             | 23.91          | .....         | .....        | 197             | .....                     |
| North Carolina:          |       |                |              |                          |                 |              |              |                      |                         |                                 |                 |                |               |                 |                |               |              |                 |                           |
| Northeast 1.....         | 1916  | 48 records.    | 64.2         | 2.1                      | 64.2            | 2.1          | 6.2          | 7.5                  | .....                   | .....                           | 2.2             | .....          | 4.6           | 13.2            | 53.68          | .....         | .....        | 393             | .....                     |

<sup>1</sup> U. S. Department of Agriculture Bul. 598.  
<sup>2</sup> Unpublished data in office files, U. S. Department of Agriculture.  
<sup>3</sup> U. S. Department of Agriculture Bul. 648.

<sup>4</sup> U. S. Department of Agriculture Bul. 651.  
<sup>5</sup> U. S. Department of Agriculture Bul. 659.

NOTE.—Bul. 16 (Misc. Series), U. S. Department of Agriculture, Division of Statistics, 1899, which gives cost for all cotton States, has not been included in the above table.



TABLE 469.—*Acres costs of production of wheat, with yield per acre and percentage analysis of cost factors.*

| Region.                                  | Date.     | Basls.        | La-<br>bor.   | Anti-<br>mial<br>power. | Labor<br>and<br>animal<br>power. | Trac-<br>tor. | Equip-<br>ment. | Seed.         | Twine.        | Ma-<br>nure.  | Ferti-<br>lizer. | Thresh-<br>ing. | Wa-<br>ter.   | Special<br>crop<br>insur-<br>ance. | Over-<br>head. | Land<br>charge. | Total<br>cost. | Cred-<br>its. | Net<br>cost. | Yield.       | Net<br>cost<br>per<br>bush-<br>el. |
|--|-----------|---------------|---------------|-------------------------|----------------------------------|---------------|-----------------|---------------|---------------|---------------|------------------|-----------------|---------------|------------------------------------|----------------|-----------------|----------------|---------------|--------------|--------------|------------------------------------|
|  |           | <i>Acres.</i> | <i>P. ct.</i> | <i>P. ct.</i>           | <i>P. ct.</i>                    | <i>P. ct.</i> | <i>P. ct.</i>   | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i> | <i>P. ct.</i>    | <i>P. ct.</i>   | <i>P. ct.</i> | <i>P. ct.</i>                      | <i>P. ct.</i>  | <i>P. ct.</i>   | <i>P. ct.</i>  |               |              | <i>Bush.</i> |                                    |
| Minnesota:                               | 1902-1907 | 41.70         |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | \$9.86         |               |              | 15           |                                    |
| Rice County <sup>1</sup>                 | 1902-1907 | 346.98        |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 35.5           |               |              | 15.88        |                                    |
| Rice County <sup>2</sup>                 | 1902-1907 | 821.98        |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 34.5           |               |              | 15.88        |                                    |
| Lyon County <sup>3</sup>                 | 1902-1907 | 3,821.98      |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 35.7           |               |              | 12.59        |                                    |
| Lyon County <sup>4</sup>                 | 1902-1907 | 415.32        |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 31.8           |               |              | 22.01        |                                    |
| Norman County <sup>5</sup>               | 1902-1907 | 5,108.83      |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 30.1           |               |              | 12.36        |                                    |
| Norman County <sup>6</sup>               | 1902-1907 | 3,650.52      |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 28.9           |               |              | 16.61        |                                    |
| Wisconsin:                               | 1902-1918 | 77            |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 23.8           |               |              | 17.0         |                                    |
| North Dakota <sup>7</sup>                | 1911-1916 | 22.3          | 21.9          |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 20.8           |               |              | 13.2         |                                    |
| North Dakota <sup>8</sup>                | 1917      | 17.8          | 23.0          |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 14.9           |               |              | 27.4         |                                    |
| North Dakota <sup>9</sup>                | 1917      | 16.7          | 22.7          |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 13.7           |               |              | 23.0         |                                    |
| North Dakota <sup>10</sup>               | 1917      | 38            | 17.5          | 16.2                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 21.5           |               |              | 23.0         |                                    |
| New York <sup>11</sup>                   | 1914      | 136.8         | 16.7          | 20.7                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 21.5           |               |              | 23.0         |                                    |
| New York <sup>12</sup>                   | 1914      | 143           | 18.5          | 23.5                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 21.5           |               |              | 23.0         |                                    |
| Missouri <sup>13</sup>                   | 1910-1913 | 61.2          | 23.5          | 22.7                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 18.9           |               |              | 6.0          |                                    |
| South Carolina <sup>14</sup>             | 1914      |               |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 18.9           |               |              | 6.0          |                                    |
| Colorado:                                |           |               |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 |                |               |              |              |                                    |
| Gregory <sup>15</sup>                    | 1917      | 180           | 11.9          | 11.9                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 40.0           |               |              | 47.4         |                                    |
| Fort Morgan <sup>16</sup>                | 1917      | 102           | 16.7          | 17.8                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 34.0           |               |              | 21.5         |                                    |
| Rocky Ford <sup>17</sup>                 | 1917      | 52            | 21.6          | 23.6                    |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 | 26.1           |               |              | 33.6         |                                    |
| Winter wheat:                            |           |               |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 |                |               |              |              |                                    |
| Kansas—                                  |           |               |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 |                |               |              |              |                                    |
| Ford County <sup>18</sup>                | 1919      | 9,817         | 18.8          | 19.7                    | 33.5                             | 0.5           | 4.6             | 7.2           | 1.3           | 9.3           |                  |                 |               |                                    |                |                 | 24.5           | 25.01         | \$0.71       | 13.3         | \$1.33                             |
| Pawnee County <sup>19</sup>              | 1919      | 9,062         | 14.7          | 13.3                    | 28.0                             | 1.1           | 5.4             | 8.8           | .9            | 9.4           |                  |                 |               |                                    |                |                 | 31.9           | 24.35         | 1.29         | 13.9         | 1.66                               |
| McPherson County <sup>20</sup>           | 1919      | 4,632         | 17.9          | 16.8                    | 34.7                             | 1.1           | 6.4             | 7.6           | 2.1           | 9.3           |                  |                 |               |                                    |                |                 | 27.4           | 30.88         | .68          | 12.7         | 2.38                               |
| Missouri—                                |           |               |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 |                |               |              |              |                                    |
| Saline County <sup>21</sup>              | 1919      | 2,362         | 17.3          | 13.1                    | 30.4                             | .5            | 4.0             | 7.3           | 1.8           | 9.2           |                  |                 |               |                                    |                |                 | 37.1           | 37.55         | 2.27         | 16.3         | 2.16                               |
| Jasper County <sup>22</sup>              | 1919      | 2,949         | 19.9          | 13.2                    | 38.1                             | .5            | 4.9             | 7.0           | 1.5           | 9.2           |                  |                 |               |                                    |                |                 | 28.8           | 35.73         | 1.14         | 19.2         | 1.80                               |
| St. Charles County <sup>23</sup>         | 1919      | 3,035         | 19.4          | 16.3                    | 35.7                             | 1.4           | 6.1             | 7.4           | 1.6           | 9.1           |                  |                 |               |                                    |                |                 | 32.6           | 34.64         | .51          | 19.6         | 1.74                               |
| Nebraska—                                |           |               |               |                         |                                  |               |                 |               |               |               |                  |                 |               |                                    |                |                 |                |               |              |              |                                    |
| Phelps County <sup>24</sup>              | 1919      | 4,404         | 20.2          | 17.1                    | 37.3                             | .6            | 5.1             | 8.8           | 2.6           | .7            |                  |                 |               |                                    |                |                 | 28.8           | 24.11         | .27          | 10.8         | 2.21                               |
| Saline County <sup>25</sup>              | 1919      | 2,008         | 19.8          | 17.1                    | 36.9                             | .9            | 4.8             | 7.5           | 2.2           | .7            |                  |                 |               |                                    |                |                 | 33.2           | 30.88         | .34          | 18.1         | 2.18                               |
| Keith County <sup>26</sup>               | 1919      | 4,385         | 26.4          | 5.5                     | 31.9                             | 4.8           | 5.8             | 6.0           | 1.5           | .1            |                  |                 |               |                                    |                |                 | 33.3           | 25.78         | .26          | 18.1         | 1.38                               |
| Average winter wheat areas <sup>27</sup> | 1919      | 42,714        | 18.7          | 15.7                    | 34.4                             | 1.2           | 5.3             | 7.6           | 1.6           | 9.7           | .5               |                 |               |                                    |                |                 | 30.0           | 28.61         | .82          | 14.9         | 1.87                               |

<sup>1</sup> U. S. Department of Agriculture, Bureau of Statistics, Bul. 78.<sup>2</sup> Minn. Bul. 145.<sup>3</sup> Unpublished data in the files of the U. S. Department of Agriculture.<sup>4</sup> New York Department of Agriculture Bul. 84.<sup>5</sup> Missouri Bul. 126.<sup>6</sup> U. S. Department of Agriculture Bul. 651.<sup>7</sup> U. S. Department of Agriculture Bul. 917.<sup>8</sup> U. S. Department of Agriculture Bul. 943.<sup>9</sup> Manure and straw.

TABLE 469.—Acre costs of production of wheat, with yield per acre and percentage analysis of cost factors—Continued.

| Region.                                   | Date. | Basis. | La-<br>bor. | Animal<br>power. | Labor<br>and<br>animal<br>power. | Trac-<br>tor. | Equip-<br>ment. | Seed. | Twine. | Ma-<br>nure. | Fertili-<br>zer. | Thresh-<br>ing. | Wa-<br>ter. | Special<br>crop<br>insur-<br>ance. | Over-<br>head. | Land<br>charge. | Total<br>cost. | Cred-<br>its. | Net<br>cost. | Yield. | Net<br>cost<br>per<br>bush-<br>el. |
|---|-------|--------|-------------|------------------|----------------------------------|---------------|-----------------|-------|--------|--------------|------------------|-----------------|-------------|------------------------------------|----------------|-----------------|----------------|---------------|--------------|--------|------------------------------------|
| Spring wheat:                             |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Missouri—                                 |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Clay County <sup>1</sup>                  | 1919  | 10,376 | 15.2        | 15.8             | 31.0                             | 2.9           | 5.6             | 14.7  | 2.1    | 9.1          | 7.8              | 5.0             | 5.0         | 2.3                                | 8.5            | 20.2            | \$23.49        | \$0.68        | \$22.91      | 8.1    | \$2.83                             |
| Traverse County <sup>2</sup>              | 1919  | 7,071  | 17.4        | 19.8             | 37.2                             | .9            | 6.0             | 13.9  | 1.9    | 9.9          | 7.8              | 4.8             | 4.8         | .5                                 | 8.9            | 23.0            | 23.91          | .39           | 23.61        | 8.4    | 2.81                               |
| North Dakota—                             |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Grand Forks<br>County <sup>3</sup>        | 1919  | 10,060 | 12.0        | 16.5             | 28.5                             | .3            | 6.8             | 15.4  | 2.6    | 9.1          | 7.8              | 12.6            | 12.6        | .8                                 | 12.9           | 19.1            | 22.07          | .19           | 21.88        | 9.8    | 2.23                               |
| Morton County <sup>4</sup>                | 1919  | 5,840  | 20.4        | 23.4             | 43.8                             | 1.0           | 10.3            | 15.4  | .1     | 9.5          | 7.8              | 2.2             | 2.2         | 1.1                                | 13.5           | 11.1            | 10.33          | .50           | 13.83        | 4.4    | 4.28                               |
| South Dakota—                             |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Spink County <sup>5</sup>                 | 1919  | 9,500  | 13.5        | 14.9             | 28.4                             | 1.1           | 5.7             | 11.7  | 1.7    | 9.7          | 7.8              | 11.2            | 11.2        | 1.1                                | 6.8            | 31.7            | 23.89          | .19           | 23.70        | 9.9    | 2.39                               |
| Average spring<br>wheat area <sup>6</sup> | 1919  | 42,847 | 15.1        | 17.3             | 32.4                             | 1.3           | 6.5             | 14.1  | 1.9    | 9.1          | 7.8              | 7.8             | 7.8         | 1.2                                | 9.8            | 23.9            | 22.75          | .85           | 22.40        | 8.4    | 2.67                               |
| Missouri—                                 |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Pike County <sup>10</sup>                 | 1920  | 2,388  | 16.7        | 15.8             | 32.5                             | .....         | 8.5             | 8.5   | .9     | 9.8          | 7.9              | 4.8             | 4.8         | .3                                 | 9.3            | 24.5            | 33.05          | 1.09          | 32.55        | 13.5   | 2.41                               |
| Carroll County <sup>10</sup>              | 1920  | 8,069  | 10.8        | 16.2             | 36.0                             | .....         | 8.3             | 7.4   | .9     | 9.1          | 7.8              | 7.8             | 7.8         | .4                                 | 6.8            | 31.3            | 36.08          | .71           | 35.37        | 17.6   | 2.01                               |
| Nebraska—                                 |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Gage County <sup>10</sup>                 | 1920  | 2,076  | 17.7        | 13.6             | 31.3                             | .....         | 6.7             | 7.2   | 1.1    | 1.0          | 7.8              | 6.0             | 6.0         | .5                                 | 7.4            | 38.8            | 37.72          | .48           | 37.24        | 21.5   | 1.73                               |
| Clay County <sup>10</sup>                 | 1920  | 2,762  | 16.2        | 13.4             | 29.6                             | .....         | 4.5             | 7.6   | 1.1    | 9.6          | 7.8              | 5.2             | 5.2         | .8                                 | 10.5           | 40.1            | 33.79          | .19           | 33.60        | 13.1   | 2.56                               |
| Cheyenne County <sup>10</sup>             | 1920  | 8,185  | 17.7        | 5.8              | 23.5                             | .....         | 19.5            | 6.1   | 1.1    | 9.3          | 7.8              | 6.5             | 6.5         | 4.8                                | 5.9            | 32.3            | 27.55          | .30           | 27.25        | 19.0   | 1.43                               |
| Kansas—                                   |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Thomas County <sup>10</sup>               | 1920  | 11,008 | 20.7        | 13.3             | 34.0                             | .....         | 8.1             | 8.7   | .1     | 9.1          | 7.8              | 11.5            | 11.5        | 6.8                                | 2.7            | 28.0            | 18.20          | .37           | 17.83        | 14.1   | 1.26                               |
| McPherson County <sup>10</sup>            | 1920  | 4,769  | 16.1        | 12.4             | 28.5                             | .....         | 8.8             | 8.2   | .9     | 9.8          | 7.8              | 8.5             | 8.5         | .5                                 | 8.0            | 35.8            | 23.72          | .10           | 23.62        | 14.6   | 2.03                               |
| Pawnee County <sup>10</sup>               | 1920  | 13,073 | 13.6        | 10.0             | 23.6                             | .....         | 8.2             | 9.0   | .3     | 9.2          | 7.8              | 9.2             | 9.2         | 1.3                                | 17.2           | 26.0            | 25.31          | .09           | 24.62        | 12.1   | 2.03                               |
| Oklahoma—                                 |       |        |             |                  |                                  |               |                 |       |        |              |                  |                 |             |                                    |                |                 |                |               |              |        |                                    |
| Garfield County <sup>10</sup>             | 1920  | 7,069  | 14.2        | 12.0             | 26.2                             | .....         | 12.2            | 7.6   | 1.1    | 9.3          | 7.8              | 14.0            | 14.0        | .3                                 | 7.7            | 36.6            | 30.81          | .26           | 30.55        | 18.4   | 1.66                               |
| Woodward County <sup>10</sup>             | 1920  | 7,354  | 18.6        | 17.0             | 35.0                             | .....         | 9.2             | 8.0   | .....  | 9.3          | 7.8              | 9.2             | 9.2         | .9                                 | 22.2           | 14.6            | 22.16          | .84           | 21.82        | 9.5    | 2.30                               |

<sup>1</sup> U. S. Department of Agriculture Bul. 943.

<sup>9</sup> Manure and straw.

<sup>10</sup> Preliminary report on cost of producing wheat.

Note.—The Crop Reporter for May, 1911, gives the results of an investigation on the cost of producing wheat, which data have not been used in the above tabulation.

TABLE 470.—Acre costs of production of barley, with yield per acre and percentage analysis of cost factors.

| Region.                            | Date.   | Basis.        | Labor.           | Animal power.    | Labor and animal power. | Equip-ment.      | Seed.            | Twine.           | Manure.          | Thresh-ing.      | Over-head.       | Land charge.     | Water.           | Total cost. | Yield.          | Gross cost per bushel. <sup>1</sup> |
|------------------------------------|---------|---------------|------------------|------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|-----------------|-------------------------------------|
|                                    |         | <i>Acres.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i>        | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> |             | <i>Bushels.</i> |                                     |
| Minnesota:                         | 1908-12 | 375.31        |                  |                  | 31.8                    | 7.6              | 13.7             | 1.5              |                  | 5.5              | 5.9              | 34.0             |                  | \$13.26     | 27.09           | \$0.49                              |
| Rice County <sup>2</sup> .....     | 1908-12 | 718.4         |                  |                  | 33.8                    | 7.2              | 11.9             | 1.9              |                  | 6.7              | 5.6              | 32.9             |                  | 12.17       | 25.62           | .48                                 |
| Lyon County <sup>3</sup> .....     | 1908-12 | 1,364.69      |                  |                  | 38.8                    | 6.1              | 12.1             | 1.7              |                  | 7.9              | 5.6              | 27.8             |                  | 10.80       | 26.96           | .40                                 |
| Norman County <sup>4</sup> .....   | 1908-12 | 474.5         |                  |                  | 36.3                    | 4.9              | 9.2              | 1.4              | 8.3              | 4.2              | 7.9              | 27.3             |                  | 14.55       | 24.2            | .60                                 |
| Wisconsin:                         | 1910-18 |               |                  | 18.8             |                         |                  | 10.7             | 1.9              | 5.7              | 11.4             |                  | 20.6             |                  | 11.38       | 21.7            | .52                                 |
| North Dakota:                      | 1911-16 |               |                  | 24.7             |                         | 5.9              | 12.8             | 2.0              | 8.3              | 13.0             |                  | 14.9             |                  | 15.73       | 21.7            | .72                                 |
| North Dakota:                      | 1917    |               |                  | 24.5             |                         |                  |                  |                  |                  |                  |                  |                  |                  |             |                 |                                     |
| Colorado:                          |         |               |                  |                  |                         |                  |                  |                  |                  |                  |                  |                  |                  |             |                 |                                     |
| Greasey Co. <sup>4</sup> .....     | 1918    | 742.0         | 11.2             | 11.0             | 22.2                    | 1.7              | 4.7              | 1.6              | 3.5              | 15.5             | 7.1              | 40.6             | 3.1              | 40.55       | 53.9            | .75                                 |
| Fort Morgan Co. <sup>4</sup> ..... | 1918    | 144.0         | 15.6             | 18.1             | 33.7                    | 2.2              | 4.2              | 1.4              | 4.3              | 9.6              | 7.9              | 34.6             | 2.1              | 43.49       | 46.7            | .93                                 |

<sup>1</sup> Value of straw not deducted because of lack of data.<sup>2</sup> Minnesota Bul. 145.<sup>3</sup> Unpublished data in office files, U. S. Department of Agriculture.<sup>4</sup> U. S. Department of Agriculture Bul. 917.

TABLE 471.—Acre costs of production of rye, with yield per acre and percentage analysis of cost factors.

| Region.                                | Date.     | Basis.        | Labor.           | Animal power.    | Labor and animal power. | Equip-ment.      | Seed.            | Twine.           | Manure.          | Ferti-lizer.     | Thresh-ing.      | Over-head.       | Land charge.     | Total cost. | Yield per acre. | Gross cost per bushel. <sup>1</sup> |
|--|-----------|---------------|------------------|------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------|-----------------|-------------------------------------|
|  |           | <i>Acres.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i>        | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> |             | <i>Bushels.</i> |                                     |
| Minnesota:                             | 1908-1912 | 4.78          |                  |                  | 33.6                    | 7.9              | 9.8              | 1.2              |                  |                  | 7.2              | 5.1              | 35.2             | \$12.78     |                 |                                     |
| Rice County <sup>2</sup> .....         | 1908-1912 | 37.98         |                  |                  | 31.3                    | 8.0              | 12.8             | 2.0              |                  |                  | 4.6              | 4.8              | 36.5             | 10.96       | 14.18           | \$0.77                              |
| Lyon County <sup>3</sup> .....         | 1908-1912 | 115.65        |                  |                  | 43.1                    | 6.2              | 11.0             | 1.2              |                  |                  | 5.6              | 4.8              | 28.1             | 10.67       |                 |                                     |
| Norman County <sup>2</sup> .....       | 1908-1912 | 128.8         |                  |                  | 47.3                    | 7.1              | 6.7              | 1.5              |                  |                  | 6.3              | 3.6              | 27.5             | 15.28       |                 | .65                                 |
| Halsted <sup>3</sup> .....             | 1913-1917 | 30.84         |                  |                  | 39.6                    | 9.4              | 5.7              | 1.7              |                  |                  | 7.2              | 6.4              | 30.0             | 16.66       | 27.7            | .69                                 |
| Cokato <sup>3</sup> .....              | 1913-1917 |               |                  |                  | 37.7                    | 4.2              | 7.5              | 2.0              | 5.7              |                  | 5.0              | 2.8              | 35.1             | 11.21       | 16.2            | .69                                 |
| Wisconsin:                             | 1908-1918 |               |                  | 18.4             |                         |                  | 12.9             | 2.9              |                  |                  | 4.0              | 10.2             | 10.5             | 33.44       | 20.0            | 1.96                                |
| New York <sup>4</sup> .....            | 1918      | Records.      | 23.1             | 19.1             | 42.6                    | 6.9              | 11.7             | 3.2              |                  | 10.0             | 4.6              | 10.4             | 11.6             | 38.14       | 17.5            | 2.01                                |
| New York <sup>4</sup> .....            | 1918      | 60            | 23.1             | 18.8             | 41.9                    | 6.4              | 9.8              | 1.8              |                  | 15.7             | 7.0              | 4.8              | 13.0             | 35.09       | 25.0            | 1.72                                |
| New Jersey <sup>4</sup> .....          | 1918      |               | 21.4             | 19.7             | 41.1                    | 6.8              | 9.8              | 2.0              |                  | 18.6             |                  | 4.7              | 24.2             | 8.59        | 7.9             | 1.09                                |
| New Jersey <sup>4</sup> .....          | 1918      |               | 17.5             | 16.0             | 33.5                    | 5.8              | 12.1             | 2.0              |                  |                  |                  |                  |                  |             |                 |                                     |
| Georgia <sup>5</sup> , Brooks Co. .... | 1914      | 12            | 19.7             | 21.5             | 41.2                    | 4.4              | 16.5             | 1.0              |                  |                  | 12.7             |                  |                  |             |                 |                                     |

<sup>1</sup> Value of straw not deducted because of lack of data.<sup>2</sup> Minnesota Bul. 145.<sup>3</sup> Minnesota Bul. 176.<sup>4</sup> Unpublished data in office files, U. S. Department of Agriculture.<sup>5</sup> U. S. Department of Agriculture Bul. 648.

TABLE 472.—*Acres costs of production of potatoes, with yield per acre and percentage analysis of cost factors.*

| Region.    | Date.     | Base.          | Labor. | Animal power. | Labor and animal power. | Seed and seedling material. | Manure. | Fertilizer. | Spray materials. | Equipment. | Overhead. | Containers. | Storage. | Water rent. | Land charge. | Total cost. | Yield. | Cost per bushel. |
|------------|-----------|----------------|--------|---------------|-------------------------|-----------------------------|---------|-------------|------------------|------------|-----------|-------------|----------|-------------|--------------|-------------|--------|------------------|
| Minnesota: | 1919      | 2,558 acres.   | 25.5   | 18.3          | 44.8                    | 19.2                        | 5.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | \$78.09     | 103.1  | \$0.76           |
|            | 1919      | 270 acres.     | 25.0   | 18.1          | 44.1                    | 19.2                        | 5.8     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 88.27       | 104.3  | .85              |
|            | 1913-14   | 328 acres.     | 34.1   | 18.5          | 52.6                    | 10.8                        | 13.4    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 38.32       | 116.0  | .83              |
|            | 1913-14   | 3,450 acres.   | 29.2   | 16.2          | 45.4                    | 16.9                        | 5.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 42.35       | 122.0  | .85              |
|            | 1907      | 231.64 acres.  | 27.8   | 17.3          | 45.1                    | 13.9                        | 13.9    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 26.37       | 127.0  | .21              |
|            | 1907      | 237.98 acres.  | 27.8   | 17.3          | 45.1                    | 13.9                        | 13.9    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 37.72       | 162.0  | .23              |
|            | 1907-1909 | 689.74 acres.  | 27.8   | 17.3          | 45.1                    | 13.9                        | 13.9    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 32.13       | 93.0   | .35              |
|            | 1919      | 381 acres.     | 29.7   | 18.6          | 48.3                    | 11.5                        | 12.8    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 107.60      | 151.7  | .71              |
|            | 1919      | 614 acres.     | 27.8   | 17.3          | 45.1                    | 13.9                        | 13.9    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 88.08       | 122.8  | .72              |
|            | 1913-14   | 987 acres.     | 32.2   | 18.2          | 50.4                    | 10.1                        | 14.2    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 33.47       | 127.0  | .26              |
| Wisconsin: | 1913-14   | 195 acres.     | 31.1   | 17.9          | 49.0                    | 15.9                        | 9.8     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 47.43       | 185.0  | .26              |
|            | 1909-13   | 271.5 acres.   | 27.8   | 17.3          | 45.1                    | 13.9                        | 13.9    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 30.03       | 110.0  | .27              |
|            | 1919      | 508 acres.     | 28.3   | 20.0          | 48.3                    | 9.1                         | 15.8    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 84.34       | 108.7  | .78              |
|            | 1919      | 497.5 acres.   | 30.7   | 17.2          | 47.9                    | 13.3                        | 18.1    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 89.85       | 128.2  | .72              |
|            | 1913-14   | 220 acres.     | 35.9   | 18.9          | 54.8                    | 9.0                         | 17.4    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 33.64       | 138.0  | .75              |
|            | 1913-14   | 260 acres.     | 37.4   | 14.3          | 51.7                    | 10.8                        | 16.2    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 46.21       | 148.0  | .31              |
|            | 1913-14   | 340 acres.     | 34.7   | 17.3          | 52.0                    | 8.6                         | 17.1    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 38.07       | 145.0  | .26              |
|            | 1919      | 560.5 acres.   | 27.4   | 24.6          | 52.0                    | 11.7                        | 11.7    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 96.14       | 141.0  | .68              |
|            | 1919      | 539.5 acres.   | 23.6   | 23.4          | 47.0                    | 11.6                        | 12.7    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 116.85      | 201.8  | .66              |
|            | 1913-14   | 122.5 acres.   | 26.6   | 17.1          | 43.7                    | 11.7                        | 24.5    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 63.12       | 211.0  | .30              |
| New York:  | 1913-14   | 877.2 acres.   | 27.4   | 18.9          | 46.3                    | 12.4                        | 14.5    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 45.84       | 151.0  | .30              |
|            | 1913-14   | 560 acres.     | 34.6   | 18.0          | 52.6                    | 11.7                        | 13.1    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 42.65       | 135.0  | .32              |
|            | 1913-14   | 2,000.8 acres. | 13.6   | 8.1           | 21.7                    | 18.0                        | 5.2     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 82.83       | 167.0  | .50              |
|            | 1913-14   | 270.8 acres.   | 26.6   | 21.0          | 47.6                    | 23.3                        | 10.3    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 64.88       | 102.49 | .63              |
|            | 1912      | 195.5 acres.   | 26.3   | 20.6          | 46.9                    | 13.5                        | 10.8    | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 56.71       | 102.66 | .55              |
|            | 1913      | 158.3 acres.   | 27.2   | 21.7          | 48.9                    | 14.0                        | 8.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 57.19       | 154.7  | .37              |
|            | 1914      | 183.3 acres.   | 27.2   | 21.7          | 48.9                    | 14.0                        | 8.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 57.19       | 154.7  | .37              |
|            | 1919      | 1,633 acres.   | 19.1   | 11.6          | 30.7                    | 9.9                         | 2.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 219.60      | 253.6  | .87              |
|            | 1913-14   | 2,511 acres.   | 21.7   | 11.3          | 33.0                    | 9.3                         | 4.8     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 91.48       | 254.0  | .36              |
|            | 1913-14   | 276 acres.     | 21.0   | 12.8          | 33.8                    | 7.0                         | 8.3     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 86.94       | 250.0  | .35              |
| Maine:     | 1919      | 1,633 acres.   | 19.1   | 11.6          | 30.7                    | 9.9                         | 2.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 219.60      | 253.6  | .87              |
|            | 1913-14   | 2,511 acres.   | 21.7   | 11.3          | 33.0                    | 9.3                         | 4.8     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 91.48       | 254.0  | .36              |
| Vermont:   | 1919      | 1,633 acres.   | 19.1   | 11.6          | 30.7                    | 9.9                         | 2.1     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 219.60      | 253.6  | .87              |
|            | 1913-14   | 2,511 acres.   | 21.7   | 11.3          | 33.0                    | 9.3                         | 4.8     | Per ct.     | Per ct.          | Per ct.    | Per ct.   | Per ct.     | Per ct.  | Per ct.     | Per ct.      | 91.48       | 254.0  | .36              |

|                |         |             |       |       |       |       |       |       |       |       |       |        |       |       |
|----------------|---------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| New Jersey:    | 1913-14 | 21 records  | 20.2  | 19.0  | 11.9  | 32.5  | 2.2   | 3.1   | 4.2   | 4     | 6.5   | 81.92  | 173.0 | .47   |
| Southern       | 1913-14 | 36 records  | 22.9  | 21.7  | 7.7   | 28.3  | 1.2   | 3.1   | 4.5   | .8    | 8.8   | 80.78  | 245.0 | .33   |
| Central        | 1919    | 21.6        | 31.6  | 15.2  | 62.0  | 22.2  | 2.2   | 5.4   | .3    | .6    | 10.5  | 183.16 | 193.0 | .96   |
| Mountain       | 1919    | 21.7        | 14.8  | 10.8  | 712.6 | 25.6  | 2.2   | 5.0   | .1    | 1.1   | 6.1   | 163.17 | 133.0 | 1.23  |
| Salem          | 1919    | 23.9        | 36.7  | 8.9   | 716.1 | 28.4  | 2.7   | 5.5   | .1    | 1.4   | 5.3   | 177.01 | 148.0 | 1.27  |
| Cumberland     | 1913-14 | 82 records  | 21.7  | 13.0  | 5.2   | 33.5  | 1.8   | 3.0   | 5.0   | ..... | 11.8  | 82.83  | 167.0 | .50   |
| Long Island    | 1913-14 | 37 records  | 21.3  | 14.4  | ..... | 33.2  | 1.4   | 1.7   | 4.4   | 12.5  | 11.1  | 95.48  | 142.0 | .67   |
| Virginia:      | 1913-14 | 22 records  | 23.0  | 12.3  | ..... | 25.7  | .7    | 1.8   | 4.7   | 16.6  | 13.2  | 83.79  | 139.0 | .60   |
| Norfolk        | 1914    | 4 records   | 18.2  | 12.7  | ..... | 23.5  | ..... | 3.4   | ..... | 1.7   | 13.4  | 37.17  | 69.0  | .54   |
| Georgia:       | 1913-14 | 42 records  | 24.1  | 14.1  | ..... | 32.3  | .3    | 1.1   | 4.0   | 15.5  | 8.6   | 89.70  | 122.0 | .74   |
| Brooks County  | 1913-14 | 33 records  | 20.4  | 19.3  | ..... | 33.1  | .7    | .5    | 3.7   | 13.8  | 8.5   | 93.46  | 146.0 | .64   |
| Florida:       | 1913-14 | 43 records  | 26.2  | 35.6  | ..... | ..... | .7    | 2.1   | 3.8   | 8.7   | 22.9  | 93.96  | 87.0  | .45   |
| South Carolina | 1913-14 | 19 records  | 35.8  | 13.5  | 7.3   | ..... | ..... | 3.0   | 5.3   | 11.0  | 22.3  | 82.27  | 258.0 | .32   |
| Texas:         | 1913-14 | 1,502 acres | 40.5  | 11.4  | 6.5   | ..... | .6    | 4.0   | 4.9   | 12.0  | 18.4  | 62.90  | 217.0 | .29   |
| Colorado:      | 1913-14 | 22 records  | 40.3  | 13.3  | 16.1  | ..... | 1.6   | 3.6   | 3.9   | ..... | 21.2  | 55.43  | 174.0 | .32   |
| Montrose       | 1913-14 | 19 records  | 39.5  | 17.0  | 8.3   | ..... | 1.0   | 4.4   | 4.1   | ..... | 25.7  | 45.89  | 151.0 | .30   |
| Greeley        | 1913-14 | 23 records  | 39.6  | 9.0   | 4.0   | ..... | ..... | 4.4   | 5.7   | 8.7   | 28.6  | 45.86  | 145.0 | .32   |
| Iowa:          | 1913-14 | 21 records  | 41.6  | 9.9   | 5.0   | ..... | ..... | 2.2   | 6.2   | 10.2  | 23.1  | 91.25  | 311.0 | .29   |
| Eastern        | 1913-14 | .....       | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1.8   | .....  | ..... | ..... |
| Grundy County  | 1913-14 | .....       | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | ..... | ..... |
| Washington:    | 1913-14 | .....       | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | ..... | ..... |
| Eastern        | 1913-14 | .....       | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | ..... | ..... |
| Yakima         | 1913-14 | .....       | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .....  | ..... | ..... |

<sup>1</sup> New York Department of Agriculture Bul. 86.

<sup>2</sup> Costly cost of cover crop.

<sup>3</sup> Includes small charge for cost of cover crop.

<sup>4</sup> U. S. Department of Agriculture Bul. 648.

<sup>1</sup> Unpublished data in office files of U. S. Department of Agriculture.

<sup>2</sup> U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.

<sup>3</sup> Minnesota Bul. 145.

<sup>4</sup> New York Bul. 377.

TABLE 473.—*Acre costs of production of sugar beets, with yield per acre and percentage analysis of cost factors.*

| Region.                                | Date.   | Basls.   | Labor.  | Animal power. | Con- tract labor. | Total labor and animal power. | Equip- ment. | Seed.   | Manure. | Per- fertilizer. | Taxes and insur- ance. | Over- head. | Land charge. | Water.  | Total cost. | Yield. | Cost per ton. <sup>1</sup> |
|--|---------|----------|---------|---------------|-------------------|-------------------------------|--------------|---------|---------|------------------|------------------------|-------------|--------------|---------|-------------|--------|----------------------------|
|  |         |          | Per ct. | Per ct.       | Per ct.           | Per ct.                       | Per ct.      | Per ct. | Per ct. | Per ct.          | Per ct.                | Per ct.     | Per ct.      | Per ct. |             | Tons.  |                            |
| Colorado:                              |         |          |         |               |                   |                               |              |         |         |                  |                        |             |              |         |             |        | \$1.06                     |
| Greeley <sup>2</sup>                   | 1914-15 | 5,028.4  |         |               |                   | 54.0                          | 2.8          | 2.5     | 7.6     |                  | 1.3                    | 1.9         | 29.3         | 0.7     | \$72.51     | 15.57  | 4.66                       |
| Rocky Ford <sup>3</sup>                | 1914-15 | 2,285.95 |         |               |                   | 58.1                          | 3.1          | 3.3     | 4.5     |                  | 1.2                    | 2.0         | 28.0         |         | 64.89       | 12.99  | 4.99                       |
| Fort Morgan <sup>4</sup>               | 1915    | 2,285.5  |         |               |                   | 58.9                          | 4.4          | 3.3     | 5.3     |                  | 1.6                    | 2.0         | 25.6         | 1.6     | 64.98       | 13.97  | 4.76                       |
| Greeley <sup>2</sup>                   | 1917    | 2,628.40 |         |               |                   | 62.8                          | 4.2          | 2.1     | 6.3     |                  | 1.9                    | 5.8         | 16.3         | 1.9     | 86.95       | 15.57  | 5.58                       |
| Fort Morgan <sup>4</sup>               | 1917    | 2,455.50 |         |               |                   | 45.0                          | 4.0          | 2.6     | 4.2     |                  | 2.2                    | 5.9         | 14.1         | 1.4     | 81.98       | 13.65  | 6.01                       |
| Rocky Ford <sup>3</sup>                | 1917    | 2,285.95 |         |               |                   | 63.7                          | 2.9          | 2.3     | 3.2     |                  | 2.0                    | 5.7         | 18.6         | 1.6     | 92.46       | 12.99  | 7.12                       |
| California:                            |         |          |         |               |                   |                               |              |         |         |                  |                        |             |              |         |             |        |                            |
| Los Angeles <sup>4</sup>               | 1915-16 | 7,711.5  |         |               |                   | 46.1                          | 4.2          | 3.7     | 1.0     |                  | 3.0                    | 1.5         | 39.7         | .8      | 67.11       | 14.52  | 4.62                       |
| Ontario <sup>5</sup>                   | 1915-16 | 2,811.0  |         |               |                   | 52.4                          | 4.6          | 3.6     | 1.6     |                  | 3.6                    | 1.7         | 32.5         |         | 54.88       | 9.53   | 5.76                       |
| Salinas <sup>6</sup>                   | 1915-16 | 3,616.0  |         |               |                   | 53.6                          | 4.9          | 3.5     | .4      |                  | 1.6                    | 1.8         | 31.9         | 2.3     | 66.45       | 15.59  | 4.26                       |
| Utah:                                  |         |          |         |               |                   |                               |              |         |         |                  |                        |             |              |         |             |        |                            |
| Garland <sup>5</sup>                   | 1914-15 | 1,461.0  |         |               |                   | 38.2                          | 4.9          | 3.2     | 5.3     |                  | 1.7                    | 2.1         | 23.3         | 1.3     | 66.03       | 14.85  | 4.65                       |
| Provo <sup>6</sup>                     | 1914-15 | 833.0    |         |               |                   | 34.7                          | 5.0          | 3.2     | 6.1     |                  | 2.8                    | 2.0         | 25.5         | .7      | 69.59       | 14.96  | 4.65                       |
| Lehi <sup>7</sup>                      | 1918    | 303.5    |         |               |                   | 63.0                          | 6.2          | 1.4     | 6.5     |                  | 1.3                    | 7.8         | 12.4         | 1.4     | 151.59      | 16.1   | 9.41                       |
| Garland <sup>7</sup>                   | 1918    | 768.0    |         |               |                   | 62.0                          | 6.6          | 1.5     | 3.9     |                  | 1.0                    | 7.0         | 17.3         | .7      | 131.36      | 15.8   | 8.31                       |
| Idaho:                                 |         |          |         |               |                   |                               |              |         |         |                  |                        |             |              |         |             |        |                            |
| Idaho Falls <sup>5</sup>               | 1915    | 723.0    |         |               |                   | 56.3                          | 6.4          | 3.4     | 5.6     |                  | 2.7                    | 2.0         | 21.2         | 2.4     | 62.68       | 13.02  | 4.60                       |
| Idaho Falls and Blackfoot <sup>7</sup> | 1918    | 892.8    |         |               |                   | 56.8                          | 7.6          | 1.6     | 5.3     |                  | 1.1                    | 9.3         | 17.3         | 1.0     | 115.41      | 13.1   | 8.81                       |
| Twin Falls <sup>7</sup>                | 1919    | 687.03   |         |               |                   | 54.2                          | 5.3          | 1.7     | 2.5     |                  | 2.7                    | 6.1         | 25.2         | 2.3     | 136.39      | 10.9   | 12.51                      |
| Michigan:                              |         |          |         |               |                   |                               |              |         |         |                  |                        |             |              |         |             |        |                            |
| Caro <sup>5</sup>                      | 1914-15 | 2,017.65 |         |               |                   | 65.9                          | 4.3          | 4.9     | 4.0     |                  | 2.1                    | 2.3         | 14.0         |         | 47.05       | 9.73   | 4.90                       |
| Almas <sup>5</sup>                     | 1914-15 | 505.79   |         |               |                   | 61.3                          | 4.3          | 4.0     | 5.1     |                  | 1.4                    | 2.2         | 20.3         |         | 57.42       | 11.4   | 5.04                       |
| Grand Rapids <sup>5</sup>              | 1914-15 | 230.53   |         |               |                   | 64.4                          | 4.6          | 4.0     | 5.1     |                  | 1.7                    | 2.3         | 15.6         |         | 53.05       | 10.16  | 5.22                       |
| Ohio:                                  |         |          |         |               |                   |                               |              |         |         |                  |                        |             |              |         |             |        |                            |
| Northwestern <sup>5</sup>              | 1914-15 | 1,534.65 |         |               |                   | 60.7                          | 4.4          | 4.1     | 1.3     |                  | 1.6                    | 2.0         | 24.0         |         | 56.04       | 13.17  | 4.26                       |
| Montana <sup>5</sup>                   | 1915    | 8,849.0  |         |               |                   | 64.5                          | 4.7          | 3.1     | 6.7     |                  |                        |             | 28.6         |         | 55.38       | 10.76  | 5.24                       |

<sup>1</sup> Gross cost per ton. The value of beet tops usually runs from \$2 to \$3 per acre.  
<sup>2</sup> U. S. Department of Agriculture Bul. 736.  
<sup>3</sup> U. S. Department of Agriculture Bul. 917.  
<sup>4</sup> U. S. Department of Agriculture Bul. 760.  
<sup>5</sup> U. S. Department of Agriculture Bul. 693.  
<sup>6</sup> Includes a small charge for loss on abandoned acreage.  
<sup>7</sup> U. S. Department of Agriculture Bul. 983.  
<sup>8</sup> U. S. Department of Agriculture Bul. 748.  
<sup>9</sup> U. S. Department of Agriculture Bul. 735.

TABLE 474.—*Acres costs of production of tobacco, with yield per acre and percentage analysis of cost factors.*

| Region.                  | Date.     | Num-<br>ber of<br>records. | Labor.<br>power. | Animal<br>power. | Labor<br>and<br>animal<br>power. | Seed.            | Equip-<br>ment.  | Manure<br>and fer-<br>tilizer. | Insur-<br>ance.  | Barns<br>and<br>stacks. | Other<br>costs.  | Land<br>charge.  | Total<br>cost. | Yield. | Cost<br>per<br>unit. |
|--------------------------|-----------|----------------------------|------------------|------------------|----------------------------------|------------------|------------------|--------------------------------|------------------|-------------------------|------------------|------------------|----------------|--------|----------------------|
| Kentucky:                |           |                            |                  |                  |                                  |                  |                  |                                |                  |                         |                  |                  |                |        |                      |
| Purvey district 1.....   | 1919      | 81                         | 42.0             | 6.8              | 48.8                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>.....               | Per ct.<br>..... | Per ct.<br>.....        | Per ct.<br>..... | Per ct.<br>..... | \$289.10       | 1,141  | \$0.25               |
| Danville district 1..... | 1910      | 70                         | 49.5             | 12.5             | 62.0                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>.....               | Per ct.<br>..... | Per ct.<br>.....        | Per ct.<br>..... | Per ct.<br>..... | 141.76         | 1,825  | .17                  |
| Wisconsin 1.....         | 1909-1918 | 19                         | 45.3             | 15.4             | 60.7                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>.....               | Per ct.<br>..... | Per ct.<br>.....        | Per ct.<br>..... | Per ct.<br>..... | 61.00          | 1,300  | .06                  |

<sup>1</sup> Kentucky Bul. 226. \* Includes canvas, spray material, wood and coal, seed and plants.

\* Unpublished data in files of U. S. Department of Agriculture.

TABLE 475.—*Acres costs of production of buckwheat, with yield per acre and percentage analysis of cost factors.*

| Region.         | Date. | Acres. | Labor. | Animal<br>power. | Labor<br>and<br>animal<br>power. | Equip-<br>ment.  | Seed.            | Twine.           | Ma-<br>nure.     | Ferti-<br>lizer. | Thresh-<br>ing.  | Over-<br>head.   | Land<br>charge.  | Total<br>cost. | Yield<br>per<br>acre. | Cost<br>per<br>bushel. |
|-----------------|-------|--------|--------|------------------|----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|-----------------------|------------------------|
| New York 1..... | 1913  | 75.0   | 19.2   | 30.3             | 49.5                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | \$18.04        | Bushels.<br>14.0      | \$1.29                 |
| New York 1..... | 1914  | 59.5   | 23.4   | 34.9             | 58.3                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | 18.68          | 18.7                  | .83                    |

<sup>1</sup> New York Department of Agriculture Bul. 80.TABLE 476.—*Acres costs of production of grain sorghums (kafer and milo), with yield per acre and percentage analysis of cost factors.*

| Region.         | Date. | Num-<br>ber of<br>records. | Labor. | Animal<br>power. | Labor<br>and<br>animal<br>power. | Seed.            | Ma-<br>nure.     | Twine.           | Thresh-<br>ing.  | Equip-<br>ment.  | Taxes<br>and<br>insur-<br>ance. | Over-<br>head.   | Land<br>charge.  | Total<br>cost. | Yield.           | Cost<br>per<br>bushel. |
|-----------------|-------|----------------------------|--------|------------------|----------------------------------|------------------|------------------|------------------|------------------|------------------|---------------------------------|------------------|------------------|----------------|------------------|------------------------|
| Texas 1.....    | 1917  | 40                         | 20.8   | 29.2             | 50.0                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>.....                | Per ct.<br>..... | Per ct.<br>..... | \$15.74        | Bushels.<br>22.9 | \$0.76                 |
| Oklahoma 1..... | 1917  | 37                         | 21.6   | 27.1             | 48.7                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>.....                | Per ct.<br>..... | Per ct.<br>..... | 22.65          | 22.6             | 1.03                   |
| Kansas 1.....   | 1917  | 19                         | 18.7   | 30.1             | 38.8                             | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>..... | Per ct.<br>.....                | Per ct.<br>..... | Per ct.<br>..... | 33.72          | 23.2             | 1.45                   |

<sup>1</sup> Unpublished data in files of U. S. Department of Agriculture.

TABLE 477.—*Acre costs of production of apples, with yield per acre and percentage analysis of cost factors.*

| Region.                          | Date.     | Rec-<br>ords. | Main-<br>tenance<br>bor. | Hand-<br>ling<br>labor. | Total<br>labor.<br>bor. | Ma-<br>nure. | Fer-<br>til-<br>izer. | Spray<br>ma-<br>te-<br>rials. | Con-<br>tainers. | Equip-<br>ment. | Applie-<br>building<br>charge. | Tax. | In-<br>sur-<br>ance. | Wa-<br>ter. | Over-<br>head. | Land<br>charge. | Total<br>cost. | To-<br>tal<br>cred-<br>its. | Net<br>cost. | Yield. | Net<br>cost<br>per<br>unit<br>of<br>yield. |
|----------------------------------|-----------|---------------|--------------------------|-------------------------|-------------------------|--------------|-----------------------|-------------------------------|------------------|-----------------|--------------------------------|------|----------------------|-------------|----------------|-----------------|----------------|-----------------------------|--------------|--------|--|
| <i>New York.</i>                 |           |               |                          |                         |                         |              |                       |                               |                  |                 |                                |      |                      |             |                |                 |                |                             |              |        |  |
| Wayne County <sup>1</sup>        | 1910-1915 | 44            | 19.9                     | 20.6                    | 40.5                    | 6.1          | 3.3                   | 4.7                           | 15.6             | 1.3             | 4.5                            | 1.5  | 0.3                  |             |                |                 | \$23.58        | \$102.08                    |              | 73.2   | \$1.40                                     |
| Ontario County <sup>1</sup>      | 1910-1915 | 42            | 20.6                     | 20.3                    | 40.8                    | 7.2          | 5.5                   | 6.2                           | 24.2             | .8              | 4.5                            | 1.5  | 0.3                  |             |                |                 | 118.52         | 118.52                      |              | 98.3   | 1.27                                       |
| Monroe County <sup>1</sup>       | 1910-1915 | 47            | 17.2                     | 19.5                    | 36.7                    | 6.1          | 1.2                   | 6.2                           | 22.6             | .8              | 1.1                            | 1.7  | .4                   |             |                |                 | 123.00         | 123.00                      |              | 85.3   | 1.45                                       |
| Oleburg County <sup>1</sup>      | 1910-1915 | 50            | 16.2                     | 18.8                    | 35.0                    | 6.5          | .5                    | 7.6                           | 22.0             | .8              | 2.7                            | 1.3  | .3                   |             |                |                 | 137.97         | 137.97                      |              | 86.8   | 1.47                                       |
| Niagara County <sup>1</sup>      | 1910-1915 | 35            | 18.5                     | 20.4                    | 38.9                    | 5.5          | .7                    | 7.5                           | 22.4             | .5              | 3.1                            | 1.6  | .3                   |             |                |                 | 119.69         | 119.69                      |              | 84.1   | 1.47                                       |
| Average, 5 counties <sup>1</sup> | 1910-1915 | 218           | 18.5                     | 19.8                    | 38.3                    | 6.3          | 1.2                   | 6.5                           | 21.4             | .8              | 1.5                            | 1.7  | .3                   |             |                |                 | 115.17         | 115.17                      |              | 84.1   | 1.41                                       |
| <i>Colorado.</i>                 |           |               |                          |                         |                         |              |                       |                               |                  |                 |                                |      |                      |             |                |                 |                |                             |              |        |  |
| Mesa County <sup>2</sup>         | 1914-1915 | 49            |                          |                         | 45.1                    | 1.4          |                       | 6.1                           | 14.8             |                 | 4.6                            | 1.5  | 2.0                  |             |                |                 | 255.77         |                             |              | 275    |  |
| Delta County <sup>2</sup>        | 1914-1915 | 61            |                          |                         | 47.0                    | 2.7          |                       | 3.3                           | 17.7             |                 | 3.1                            | 2.3  | 1.4                  |             |                |                 | 253.90         |                             |              | 294    |  |
| Montrose County <sup>2</sup>     | 1914-1915 | 119           |                          |                         | 51.0                    | 2.1          |                       | 2.8                           | 18.3             |                 | 4.0                            | 1.9  | 1.2                  |             |                |                 | 208.85         |                             |              | 272    |  |
| Average, 3 counties <sup>2</sup> | 1914-1915 | 125           |                          |                         | 47.6                    | 2.2          |                       | 4.1                           | 16.0             |                 | 3.8                            | 1.9  | 1.7                  |             |                |                 | 233.79         |                             |              | 284    |  |
| <i>Idaho.</i>                    |           |               |                          |                         |                         |              |                       |                               |                  |                 |                                |      |                      |             |                |                 |                |                             |              |        |  |
| Payette Valley <sup>3</sup>      | 1915      | 38            | 18.5                     | 27.2                    | 45.7                    | 2.4          |                       | 5.4                           | 21.3             |                 | 2.1                            | 1.2  | 1.7                  | .1          |                |                 | 250.89         | 11.24                       | 238.65       | 337    | .71  |
| <i>Washington.</i>               |           |               |                          |                         |                         |              |                       |                               |                  |                 |                                |      |                      |             |                |                 |                |                             |              |        |  |
| North Yakima <sup>4</sup>        | 1915      | 64            | 16.3                     | 23.1                    | 39.4                    | 1.4          |                       | 2.6                           | 16.9             |                 | 2.9                            | 1.2  | 3.7                  | .3          |                |                 | 307.01         | 8.27                        | 308.64       | 462    | .84  |
| Zillah <sup>4</sup>              | 1915      | 56            | 23.0                     | 28.9                    | 51.9                    | 2.8          |                       | 4.6                           | 19.1             |                 | 2.7                            | 1.3  | 2.3                  | .2          |                |                 | 303.67         | 8.17                        | 305.50       | 398    | .74  |
| Yakima Valley <sup>4</sup>       | 1915      | 120           | 19.0                     | 25.4                    | 44.4                    | 2.0          |                       | 3.5                           | 17.7             |                 | 2.9                            | 1.2  | 3.1                  | .2          |                |                 | 333.91         | 8.23                        | 345.08       | 432    | .80  |
| Wenatchee Valley <sup>4</sup>    | 1914      | 87            | 15.6                     | 22.6                    | 38.2                    | .7           |                       | 2.8                           | 18.3             |                 | 2.4                            | 1.4  | 2.8                  | .2          |                |                 | 408.73         |                             |              | 593    |  |
| <i>Oregon.</i>                   |           |               |                          |                         |                         |              |                       |                               |                  |                 |                                |      |                      |             |                |                 |                |                             |              |        |  |
| Flood River <sup>5</sup>         | 1915      | 54            | 18.7                     | 21.3                    | 40.0                    | 1.0          |                       | 3.7                           | 13.4             | .1              | 2.8                            | 1.4  | 3.5                  | .2          |                |                 | 285.35         | 9.30                        | 293.96       | 222    | 1.02                                       |
| <i>Virginia.</i>                 |           |               |                          |                         |                         |              |                       |                               |                  |                 |                                |      |                      |             |                |                 |                |                             |              |        |  |
| Winchester area <sup>1</sup>     | 1916      | 20            |                          |                         | 42.5                    |              | .9                    | 1.8                           | 10.1             |                 | 6.4                            |      |                      |             |                |                 | 175.71         | 36.41                       | 139.30       | 98     | 1.02                                       |
| Winchester area <sup>1</sup>     | 1917      | 20            |                          |                         | 44.8                    |              | .9                    | 2.1                           | 10.1             |                 | 7.3                            |      |                      |             |                |                 | 134.01         | 31.47                       | 102.54       | 83     | 2.30                                       |
| Winchester area <sup>1</sup>     | 1918      | 20            |                          |                         | 44.8                    |              | .9                    | 2.0                           | 20.4             |                 | 5.0                            |      |                      |             |                |                 | 196.41         | 38.73                       | 157.68       | 64     | 2.96                                       |
| Winchester area <sup>1</sup>     | 1919      | 20            |                          |                         | 45.3                    |              | 1.6                   | 2.4                           | 10.2             |                 | 6.0                            |      |                      |             |                |                 | 174.72         | 60.15                       | 114.57       | 23.6   | 3.87                                       |
| Winchester area <sup>1</sup>     | 1920      | 20            |                          |                         | 39.5                    |              | 2.0                   | 1.7                           | 27.1             |                 | 4.5                            |      |                      |             |                |                 | 224.87         | 23.42                       | 201.45       | 52.1   | 3.87                                       |
| Average <sup>1</sup>             | 1916-1920 | 20            |                          |                         | 43.0                    |              | 1.3                   | 2.1                           | 18.3             |                 | 6.7                            |      |                      |             |                |                 | 181.33         | 40.04                       | 141.29       | 64.94  | 2.77                                       |

<sup>1</sup> U. S. Department of Agriculture Bul. 851.  
<sup>2</sup> U. S. Department of Agriculture Bul. 500.  
<sup>3</sup> U. S. Department of Agriculture Bul. 636.  
<sup>4</sup> U. S. Department of Agriculture Bul. 614.  
<sup>5</sup> U. S. Department of Agriculture Bul. 446.  
<sup>6</sup> U. S. Department of Agriculture Bul. 518.  
<sup>7</sup> Unpublished data in files of U. S. Department of Agriculture.



TABLE 478.—*Acres costs of production of hay, with yield per acre and percentage analysis of cost factors.*<sup>1</sup>

| Region.                       | Data.     | Acres.   | Kind of hay.       | Labor.       | Animal power. | Labor and animal power. | Equip- ment. | Seed.       | Manure and fertiliz- er. | Over- head.  | Land charge. | Total cost. | Yield. | Cost per ton. |
|-------------------------------|-----------|----------|--------------------|--------------|---------------|-------------------------|--------------|-------------|--------------------------|--------------|--------------|-------------|--------|---------------|
| New York <sup>2</sup> .       | 1914      | 1,806.6  | Hay                | Per ct. 13.9 | Per ct. 13.3  | Per ct. 27.2            | Per ct. 3.7  | Per ct. 8.0 | Per ct. 19.6             | Per ct. 41.2 | Tons. 1.28   | \$3.99      | 1.28   | \$7.80        |
| New York <sup>3</sup> .       | 1912      | 487.5    | Timothy and clover | 14.4         | 14.7          | 28.1                    | 5.0          | 8.5         | 23.2                     | 31.2         | 1.39         | 11.58       | 1.39   | 8.33          |
| New York <sup>4</sup> .       | 1913      | 828.7    | do.                | 15.9         | 13.0          | 28.9                    | 4.6          | 9.4         | 24.6                     | 32.5         | 1.44         | 11.30       | 1.44   | 7.85          |
| Minnesota:                    |           |          |                    |              |               |                         |              |             |                          |              |              |             |        |               |
| Rice County <sup>5</sup> .    | 1902-1907 | 783.71   | do.                |              |               | 28.8                    | 8.9          | 4.7         |                          |              | 2.28         | 6.18        | 2.28   | 2.71          |
| Lyon County <sup>6</sup> .    | 1902-1907 | 280.20   | do.                |              |               | 32.1                    | 3.7          | 5.2         |                          |              | 3.14         | 5.55        | 3.14   | 3.14          |
| Norman County <sup>7</sup> .  | 1902-1907 | 417.65   | do.                |              |               | 62.7                    | 4.0          | 4.0         |                          |              | 1.77         | 7.18        | 1.77   | 4.15          |
| Rice County <sup>8</sup> .    | 1902-1907 | 70.39    | Wild hay           |              |               | 31.0                    | 10.4         |             |                          |              | 2.28         | 6.04        | 2.28   | 2.05          |
| Lyon County <sup>9</sup> .    | 1902-1907 | 611.08   | do.                |              |               | 32.8                    | 12.8         |             |                          |              | 1.77         | 6.48        | 1.77   | 3.10          |
| Norman County <sup>10</sup> . | 1902-1907 | 831.10   | do.                |              |               | 33.9                    | 18.9         |             |                          |              | 1.77         | 6.48        | 1.77   | 1.72          |
| Rice County <sup>11</sup> .   | 1902-1907 | 683.43   | do.                |              |               | 33.2                    | 10.9         | 3.8         |                          |              | 1.61         | 10.75       | 1.61   | 0.68          |
| Lyon County <sup>12</sup> .   | 1902-1907 | 674.63   | Timothy and clover |              |               | 33.2                    | 10.3         | 4.0         |                          |              | 1.63         | 10.11       | 1.63   | 0.20          |
| Norman County <sup>13</sup> . | 1902-1907 | 1,465.91 | do.                |              |               | 33.1                    | 10.3         | 4.0         |                          |              | 1.63         | 7.74        | 1.63   | 8.15          |
| Rice County <sup>14</sup> .   | 1902-1907 | 9.82     | do.                |              |               | 30.1                    | 14.3         | 5.3         |                          |              | .95          | 8.16        | .95    |               |
| Norman County <sup>15</sup> . | 1902-1907 | 272.72   | Wild hay           |              |               | 20.1                    | 13.8         |             |                          |              |              | 7.55        |        |               |
| Rice County <sup>16</sup> .   | 1902-1907 | 60.00    | do.                |              |               | 18.9                    | 14.4         |             |                          |              |              | 5.42        |        |               |
| Norman County <sup>17</sup> . | 1902-1907 | 1,301.04 | Timothy and clover |              |               | 58.4                    | 8.6          |             |                          |              | 1.1          | 13.87       | 1.1    | 9.14          |
| Coraco <sup>18</sup> .        | 1913-1917 | 327.74   | do.                |              |               | 57.8                    | 8.4          |             |                          |              | 2.1          | 15.26       | 2.1    |               |
| Halsged <sup>19</sup> .       | 1913-1917 | 707.77   | Wild hay           |              |               | 39.0                    | 12.8         |             |                          |              |              | 15.26       |        |               |
| Wisconsin:                    |           |          |                    |              |               |                         |              |             |                          |              |              |             |        |               |
| Wisconsin <sup>20</sup> .     | 1902-1918 | 707.77   | Mixed hay          | 15.2         | 11.3          | 20.5                    | 5.6          | 7.1         | 4.9                      | 7.1          | 1.4          | 9.00        | 1.4    | 0.43          |
| Wisconsin <sup>21</sup> .     | 1902-1918 | 301.70   | Clover             | 19.2         | 13.9          | 33.1                    | 9.6          | 9.0         | 8.7                      | 3.7          | 2.2          | 11.12       | 2.2    | 5.05          |
| Wisconsin <sup>22</sup> .     | 1902-1918 | 200.08   | Timothy            | 12.6         | 10.3          | 22.8                    | 9.0          | 5.4         | 24.0                     | 1.5          | 1.4          | 10.83       | 1.4    | 7.74          |
| Ohio <sup>23</sup> .          | 1910-1913 | * 10     | Mixed              | 17.7         | 11.2          | 28.9                    | 15.1         | 8.0         |                          |              |              | 6.42        |        |               |
| Missouri <sup>24</sup> .      | 1910-1913 | 66.5     | Clover             | 19.6         | 13.3          | 32.9                    | 5.4          | 7.2         |                          | 3.5          |              | 8.10        |        |               |

<sup>1</sup> Charges for buildings and interest on current costs which appear in a few sources have been omitted.<sup>2</sup> New York Department of Agriculture Bul. 89.<sup>3</sup> New York Bul. 377.<sup>4</sup> U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.<sup>5</sup> Minnesota Bul. 145.<sup>6</sup> Minnesota Bul. 179.<sup>7</sup> Unpublished data in office files, U. S. Department of Agriculture.<sup>8</sup> Number of records.<sup>9</sup> Missouri Bul. 125.

TABLE 479.—Cost per acre of producing various truck crops, with yield and cost per unit of yield.

| Region.      | Date. | Crops.         | Labor. | Animal power. | Total labor and animal power. | Seed.  | Plants. | Containers. |         | Fertilizer. | Spray material. | Equipment. | Water. | Tractor, truck, and auto. | Insurance and taxes. | Miscellaneous. | Land charge. | Total cost. | Yield.       | Cost per unit of yield. |
|--------------|-------|----------------|--------|---------------|-------------------------------|--------|---------|-------------|---------|-------------|-----------------|------------|--------|---------------------------|----------------------|----------------|--------------|-------------|--------------|-------------------------|
|              |       |                |        |               |                               |        |         | Kind.       | Cost.   |             |                 |            |        |                           |                      |                |              |             |              |                         |
| Georgia:     | 1914  | Watermelons    | \$7.22 | \$4.92        | \$12.14                       | \$0.55 |         | Barrels     | \$6.41  | \$7.73      |                 | \$0.98     |        |                           |                      | \$0.87         | \$2.93       | \$25.20     | 0.5 earload  | \$50.40                 |
|              | 1914  | Sugar cane     | 36.39  | 14.12         | 50.51                         | 2.10   |         |             |         | 7.12        |                 | 2.88       |        |                           |                      | 3.94           | 3.45         | 55.22       | 307 gallons  | 1.28                    |
|              | 1914  | Sweet potatoes | 13.30  | 5.14          | 18.44                         |        |         |             |         | 4.76        |                 | 1.10       |        |                           |                      |                | 3.22         | 28.68       | 109 bushels  | 1.37                    |
| Mississippi: | 1921  | Beans          | 30.90  | 16.79         | 47.69                         | 8.55   |         | Hampers     | 10.78   | 23.76       |                 | 3.94       |        |                           |                      |                | 9.00         | 95.01       | 93 hampers   | 1.83                    |
|              | 1921  | Carrots        | 46.95  | 12.93         | 59.88                         | 11.03  |         | do.         | \$13.55 | 22.60       |                 | 3.03       |        |                           |                      |                | 9.00         | 116.38      | 93 hampers   | 1.25                    |
|              | 1921  | Peas           | 28.05  | 7.82          | 35.87                         | 29.80  |         | do.         | 30.00   | 22.18       |                 | 1.18       |        |                           |                      |                | 9.00         | 146.25      | 100 hampers  | 1.46                    |
| Do.:         | 1921  | Cabbages       | 19.95  | 11.04         | 30.99                         | 1.93   |         | Crates      | 30.32   | 19.30       |                 | 2.69       |        |                           |                      |                |              | 102.13      | 90 crates    | 1.13                    |
|              | 1921  | Tomatoes       | 47.25  | 14.37         | 61.62                         | 2.29   |         | do.         | 64.29   | 25.77       |                 | 3.87       |        |                           |                      |                |              | 170.20      | 923 crates   | 1.33                    |
|              | 1921  | do.            | 38.87  | 20.00         | 58.87                         | 2.87   |         | Baskets     | 5.06    | 14.29       | \$0.91          | 6.17       | \$3.25 |                           |                      |                |              | 118.26      | 2.23 tons    | 19.14                   |
| New Jersey:  | 1918  | do.            | 33.59  | 16.38         | 49.97                         | 6.00   | \$3.63  | do.         | 2.59    | 15.07       | 78              | 3.18       | \$3.58 |                           |                      |                |              | 118.38      | 2.09 tons    | 56.04                   |
|              | 1919  | do.            | 49.10  | 16.38         | 65.48                         | 6.1    | 3.29    | do.         | 3.13    | 16.28       | 18.71           | 5.63       | \$2.70 |                           |                      |                |              | 154.02      | 3.74 tons    | 24.03                   |
|              | 1920  | Onions         | 84.80  | 17.61         | 102.41                        |        | 43.02   | Hampers     | 32.03   | 33.76       | 37.79           | 7.90       |        |                           |                      |                |              | 273.15      | 130 hampers  | 1.57                    |
| Wisconsin:   | 1920  | do.            | 80.40  | 17.00         | 97.40                         | 15.00  |         |             | 0.00    | 3.00        |                 | 7.90       |        |                           |                      |                |              | 146.93      | 200 bushels  | 1.67                    |
|              | 1920  | do.            | 27.80  | 21.30         | 49.00                         | 2.00   |         |             | 1.14    |             |                 | 2.73       |        |                           |                      |                |              | 100.83      | 10.7 tons    | 6.22                    |
|              | 1920  | Cabbages       | 34.20  | 22.10         | 56.30                         | 4.47   |         | Crates      | 46.18   |             |                 | 2.07       | \$1.02 |                           |                      |                |              | 176.83      | 477 pounds   | 17                      |
| Colorado:    | 1917  | Cucumbers      | 26.75  | 16.40         | 43.15                         | 1.03   |         |             | 6.46    |             |                 | 2.47       | 1.96   |                           |                      |                |              | 45.20       | 5.9 tons     | 6.71                    |
|              | 1913  | do.            | 14.81  | 10.44         | 25.25                         | 1.10   |         |             | 6.46    |             |                 | 2.47       |        |                           |                      |                |              | 45.20       | 5.9 tons     | 6.71                    |
|              | 1914  | do.            | 3.28   | 8.72          | 12.00                         | 2.47   |         |             | 5.49    |             |                 | 2.60       |        |                           |                      |                |              | 43.27       | 8.7 tons     | 4.90                    |
| New York:    | 1914  | Sweet corn     | 51.65  | 20.45         | 72.10                         | 3.40   |         |             | 28.15   | 17.81       |                 | 3.47       |        |                           |                      |                |              | 134.47      | 2,860 pounds | 1.05                    |
|              | 1920  | do.            | 51.65  | 20.45         | 72.10                         | 3.40   |         |             | 28.15   | 17.81       |                 | 3.47       |        |                           |                      |                |              | 134.47      | 2,860 pounds | 1.05                    |

1 U. S. Department of Agriculture Bul. 648.

2 Mississippi Clr. 38.

3 Mississippi Clr. 38.

4 Mississippi Clr. 38.

5 Mississippi Clr. 38.

6 Mississippi Clr. 38.

7 New Jersey Agr. Exp. Sta. Bul. 353.

8 New Jersey Agr. Exp. Sta. Bul. 353.

9 New Jersey Agr. Exp. Sta. Bul. 353.

10 New Jersey Agr. Exp. Sta. Bul. 353.

11 New Jersey Agr. Exp. Sta. Bul. 353.

12 New Jersey Agr. Exp. Sta. Bul. 353.

13 New Jersey Agr. Exp. Sta. Bul. 353.

14 New Jersey Agr. Exp. Sta. Bul. 353.

15 New Jersey Agr. Exp. Sta. Bul. 353.

16 New Jersey Agr. Exp. Sta. Bul. 353.

17 New Jersey Agr. Exp. Sta. Bul. 353.

18 New Jersey Agr. Exp. Sta. Bul. 353.

19 New Jersey Agr. Exp. Sta. Bul. 353.

20 New Jersey Agr. Exp. Sta. Bul. 353.

21 New Jersey Agr. Exp. Sta. Bul. 353.

22 New Jersey Agr. Exp. Sta. Bul. 353.

13 \$0.92, tractor; \$5.29, truck; \$0.20, auto.

14 \$0.16 hotbed material; \$1.04, cover crop seed; \$0.66, lime; \$0.03, hauling; \$2 interest at 6 per cent.

15 Unpublished data in files of U. S. Department of Agriculture.

16 Unpublished data in files of U. S. Department of Agriculture.

17 Unpublished data in files of U. S. Department of Agriculture.

18 Unpublished data in files of U. S. Department of Agriculture.

19 Unpublished data in files of U. S. Department of Agriculture.

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32 Unpublished data in files of U. S. Department of Agriculture.

33 Unpublished data in files of U. S. Department of Agriculture.

34 Unpublished data in files of U. S. Department of Agriculture.

TABLE 480.—Acre costs of production of flax, with yield per acre and percentage analysis of cost factors.

| Region                            | Date      | Acres  | Labor     | Animal power | Labor and animal power | Equip-ment | Seed      | Twine     | Manure    | Thresh-ing | Over-head | Land charge | Total cost | Yield    | Gross cost per bushel <sup>1</sup> |
|-----------------------------------|-----------|--------|-----------|--------------|------------------------|------------|-----------|-----------|-----------|------------|-----------|-------------|------------|----------|------------------------------------|
|                                   |           |        | Per cent. | Per cent.    | Per cent.              | Per cent.  | Per cent. | Per cent. | Per cent. | Per cent.  | Per cent. | Per cent.   |            | Bushels. |                                    |
| Minnesota:                        |           |        |           |              |                        |            |           |           |           |            |           |             |            |          |                                    |
| Rice County <sup>2</sup> .....    | 1902-1907 | 173.02 |           |              | 40.2                   | 5.2        | 10.6      |           |           | 3 11.2     |           | 34.8        | \$10.07    | 12.07    | \$0.83                             |
| Norman County <sup>3</sup> .....  | 1902-1907 | 470.87 |           |              | 44.8                   | 5.1        | 10.0      |           |           | 4 13.8     |           | 28.9        | 7.27       | 9.10     | \$0.79                             |
| Lyon County <sup>4</sup> .....    | 1902-1907 | 184.06 |           |              | 39.3                   | 4.0        | 9.0       |           |           | 4 10.3     |           | 28.9        | 8.86       | 8.77     | 1.01                               |
| Norman County <sup>5</sup> .....  | 1902-1907 | 343.77 |           |              | 43.8                   | 4.8        | 11.2      |           |           | 5 12.9     |           | 35.7        | 7.03       | 8.19     | .77                                |
| Lyon County <sup>6</sup> .....    | 1902-1907 | 53.88  |           |              | 33.2                   | 6.7        | 9.4       | 2.1       |           | 5 9.7      |           | 30.4        | 8.40       | 9.19     | .96                                |
| Norman County <sup>7</sup> .....  | 1902-1907 | 197.10 |           |              | 42.5                   | 4.4        | 10.6      | 1.4       |           | 7 6.9      | 7.9       | 27.7        | 14.42      | 7.52     | .75                                |
| Lyon County <sup>8</sup> .....    | 1908-1912 | 25.06  |           |              | 38.5                   | 6.1        | 11.0      | 1.9       |           | 7 6.0      | 6.4       | 31.1        | 9.65       | 7.03     | 1.37                               |
| Norman County <sup>9</sup> .....  | 1908-1912 | 112.62 |           |              | 36.9                   | 6.8        | 11.4      | 1.4       |           | 8 4.1      | 6.8       | 34.2        | 13.15      | 10.42    | 1.26                               |
| Norman County <sup>10</sup> ..... | 1908-1912 | 23.56  |           |              | 37.0                   | 7.7        | 8.0       | 2.1       |           | 9 4.3      | 6.0       | 29.1        | 10.30      | 7.03     | 1.47                               |
| Rice County <sup>11</sup> .....   | 1908-1912 | 112.62 |           |              | 42.2                   | 7.7        | 10.7      | 1.3       |           | 7 8.3      | 4.9       | 26.3        | 18.99      | 10.0     | 1.90                               |
| Norman County <sup>12</sup> ..... | 1908-1912 | 45.33  |           |              | 46.7                   | 8.3        | 4.4       | 1.1       |           | 13.6       |           | 24.1        | 11.64      | 7.9      | 1.47                               |
| Cokeo <sup>13</sup> .....         | 1911-1916 |        |           | 25.6         |                        | 5.7        | 9.5       | 1.4       | 5.6       |            |           | 14.4        | 16.26      | 7.9      | 2.06                               |
| North Dakota <sup>14</sup> .....  | 1917      |        | 16.7      | 26.4         | 43.1                   | 5.7        | 10.3      | 1.5       | 8.0       | 17.0       |           |             |            |          |                                    |
| Do. <sup>15</sup> .....           |           |        |           |              |                        |            |           |           |           |            |           |             |            |          |                                    |

<sup>1</sup> Data on value of straw not available.<sup>2</sup> U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.<sup>3</sup> Windrow threshed.<sup>4</sup> Stacked from windrow.<sup>5</sup> Bound, shocked, and stacked.<sup>6</sup> Minnesota Bul. 145.<sup>7</sup> Stack threshed.<sup>8</sup> Shock threshed.<sup>9</sup> Minnesota Bul. 179.<sup>10</sup> Unpublished data in office files, U. S. Department of Agriculture.

TABLE 481.—*Are costs of production of oats, with yield per acre and percentage analysis of cost factors.*

| Region.                      | Date.     | Basin.          | Labor. | Animal power. | Labor and animal power. | Seed.  | Twine. | Fertilizer. | Threshing. | Overhead. | Water rent. | Land charge. | Total cost. | Yield per acre. | Cost per bushel. |
|------------------------------|-----------|-----------------|--------|---------------|-------------------------|--------|--------|-------------|------------|-----------|-------------|--------------|-------------|-----------------|------------------|
| <b>Minnesota:</b>            |           |                 |        |               |                         |        |        |             |            |           |             |              |             |                 |                  |
| Rice County <sup>1</sup>     | 1902-1907 | 3,478.17 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       |             | Bush.           | \$0.24           |
| Rice County <sup>2</sup>     | 1908-1912 | 1,701.72 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 80.85       | 41.3            | .83              |
| Rice County <sup>3</sup>     | 1902-1907 | 3,478.17 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 13.07       | 39.4            | .22              |
| <b>Minnesota:</b>            |           |                 |        |               |                         |        |        |             |            |           |             |              |             |                 |                  |
| Lyon County <sup>1</sup>     | 1902-1907 | 1,551.80 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 9.04        | 41.0            | .22              |
| Lyon County <sup>2</sup>     | 1908-1912 | 996.82 acres.   | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 12.19       | 40.2            | .30              |
| Lyon County <sup>3</sup>     | 1902-1907 | 1,551.80 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 8.09        | 41.0            | .19              |
| <b>Minnesota:</b>            |           |                 |        |               |                         |        |        |             |            |           |             |              |             |                 |                  |
| Norman County <sup>1</sup>   | 1902-1907 | 1,188.02 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 7.11        | 29.0            | .25              |
| Norman County <sup>2</sup>   | 1908-1912 | 946.76 acres.   | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 9.96        | 31.7            | .31              |
| Norman County <sup>3</sup>   | 1902-1907 | 1,037.25 acres. | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 13.21       | 35.7            | .37              |
| <b>Wisconsin:</b>            |           |                 |        |               |                         |        |        |             |            |           |             |              |             |                 |                  |
| Illinois <sup>4</sup>        | 1909-1915 | 33 records.     | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 15.47       | 35.3            | .42              |
| North Dakota <sup>4</sup>    | 1912      | 107 acres.      | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 8.45        | 38.0            | .26              |
| New York <sup>5</sup>        | 1913      | 474.3 acres.    | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 22.27       | 43.14           | .50              |
| New York <sup>6</sup>        | 1914      | 368.6 acres.    | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 31.65       | 35.1            | .62              |
| Missouri <sup>6</sup>        | 1910-1913 | 160 acres.      | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 21.33       | 26.4            | .87              |
| Georgia <sup>6</sup>         | 1914      | 49 records.     | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 10.57       | 17.5            | .49              |
| South Carolina <sup>6</sup>  | 1914      | 963.2 acres.    | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 8.06        | 21.7            | .43              |
| <b>Colorado:</b>             |           |                 |        |               |                         |        |        |             |            |           |             |              |             |                 |                  |
| Greeley County <sup>1a</sup> | 1917      | 184.50 acres.   | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 49.40       | 61.8            | .60              |
| Fort Morgan <sup>1b</sup>    | 1917      | 144 acres.      | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 37.01       | 37.7            | 1.04             |
| Rocky Ford <sup>1c</sup>     | 1917      | 75 acres.       | Perct. | Perct.        | Perct.                  | Perct. | Perct. | Perct.      | Perct.     | Perct.    | Perct.      | Perct.       | 43.90       | 54.7            | .80              |

<sup>1</sup> U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.<sup>2</sup> Minnesota Bul. 143.<sup>3</sup> On distric corn stubble.<sup>4</sup> Unpublished data in files of U. S. Department of Agriculture.<sup>5</sup> New York Bul. 377.<sup>6</sup> New York Department of Agriculture Bul. 86.<sup>7</sup> Missouri Bul. 125.<sup>8</sup> U. S. Department of Agriculture Bul. 648.<sup>9</sup> U. S. Department of Agriculture Bul. 651.<sup>10</sup> U. S. Department of Agriculture Bul. 917.

NOTE.—The Crop Reporter for June, 1911, gives the results of an investigation on the cost of producing oats, which data have not been used in the above tabulation.

TABLE 482.—*Acres costs of production of beans, with yield per acre and percentage analysis of cost factors.*

| Region.         | Date. | Acres.   | Basls. | Labor. | Ant. power. | Labor and animal power. | Equip. mant. | Seed. | Ma- nure. | Ferti- lizer. | Over- head. | Land charge. | Thresh- ing. | Con- tain- ers. | Water.  | Total cost. | Cred- its. | Net cost. | Yield. | Cost per bushel. |
|-----------------|-------|----------|--------|--------|-------------|-------------------------|--------------|-------|-----------|---------------|-------------|--------------|--------------|-----------------|---------|-------------|------------|-----------|--------|------------------|
| Colorado:       |       |          |        |        |             |                         |              |       |           |               |             |              |              |                 |         |             |            |           |        |                  |
| Greeley 1.      | 1918  | 1,853.30 | 20.3   | 19.2   | 40.0        | 4.0                     | 5.6          | 1.9   | Per ct.   | Per ct.       | Per ct.     | Per ct.      | Per ct.      | Per ct.         | Per ct. | \$50.84     | (*)        | .....     | Bush.  | 24.3             |
| Rocky Ford 1.   | 1918  | 178.50   | 21.3   | 17.9   | 47.2        | 3.5                     | 6.7          | 2.6   | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 75.96       | .....      | .....     | 26.9   | .....            |
| New York 1.     | 1917  | 540.00   | 21.5   | 31.0   | 43.5        | 4.7                     | 13.8         | 6.6   | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 58.60       | .....      | \$4.47    | 854.03 | 10.9             |
| Michigan 1.     | 1917  | 490.00   | 22.6   | 17.2   | 39.8        | 5.7                     | 16.9         | 2.7   | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 43.07       | .....      | 3.46      | 40.21  | 3.83             |
| Wisconsin 1.    | 1917  | 348.00   | 19.0   | 15.8   | 34.8        | 6.9                     | 23.2         | 9.4   | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 42.57       | .....      | 3.73      | 38.84  | 7.5              |
| California:     |       |          |        |        |             |                         |              |       |           |               |             |              |              |                 |         |             |            |           |        |                  |
| Irrigated 1.    | 1917  | 905.00   | 18.9   | 12.5   | 31.4        | 3.6                     | 2.9          | ..... | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 59.37       | .....      | 3.43      | 55.94  | 20.7             |
| Nonirrigated 1. | 1917  | 1,833.00 | 11.4   | 13.0   | 24.4        | 4.6                     | 11.7         | ..... | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 89.77       | .....      | 4.84      | 84.93  | 26.5             |
| Colorado:       |       |          |        |        |             |                         |              |       |           |               |             |              |              |                 |         |             |            |           |        |                  |
| Irrigated 1.    | 1917  | 459.00   | 21.5   | 20.9   | 42.4        | 5.5                     | 6.0          | 2.7   | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 64.08       | .....      | 5.71      | 95.07  | 25.0             |
| Nonirrigated 1. | 1917  | 502.00   | 30.2   | 27.7   | 57.9        | 7.0                     | 7.7          | ..... | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 21.30       | .....      | 2.08      | 19.31  | 6.8              |
| New Mexico:     |       |          |        |        |             |                         |              |       |           |               |             |              |              |                 |         |             |            |           |        |                  |
| Nonirrigated 1. | 1917  | 1,860.00 | 34.5   | 28.4   | 63.9        | 6.1                     | 10.0         | ..... | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 20.35       | .....      | 1.37      | 18.98  | 4.1              |
| Idaho:          |       |          |        |        |             |                         |              |       |           |               |             |              |              |                 |         |             |            |           |        |                  |
| Nonirrigated 1. | 1917  | 864.00   | 25.2   | 27.8   | 52.5        | 5.0                     | 8.3          | ..... | .....     | .....         | .....       | .....        | .....        | .....           | .....   | 35.94       | .....      | 2.19      | 33.75  | 9.7              |

\* Unpublished data in files of U. S. Department of Agriculture.

\* No credits obtainable.

1 U. S. Department of Agriculture Bul. 917.

TABLE 483.—*Acres costs of production of silage, with yield per acre and percentage analysis of cost factors.*

| Region.               | Date.     | Acres.   | Basls. | Labor. | Animal power. | Labor and animal power. | Equip- ment. | Seed. | Twine. | Manure. | Ferti- lizer. | Over- head. | Land charge. | Total costs. | Yield. | Cost per ton. |
|-----------------------|-----------|----------|--------|--------|---------------|-------------------------|--------------|-------|--------|---------|---------------|-------------|--------------|--------------|--------|---------------|
| New York 1.           | 1913      | 101.0    | 10.8   | 19.8   | 20.9          | 48.7                    | 16.0         | 2.4   | .....  | .....   | .....         | .....       | .....        | \$29.59      | 8.01   | \$3.69        |
| Do. 1.                | 1913      | 202.8    | 22.1   | 27.9   | 27.9          | 50.0                    | 14.4         | 2.9   | .....  | .....   | .....         | .....       | .....        | 31.07        | 6.31   | 4.62          |
| Do. 1.                | 1914      | 225.0    | 19.6   | .....  | 27.9          | 47.8                    | 13.1         | 2.8   | .....  | .....   | .....         | .....       | .....        | 30.89        | 7.2    | 4.29          |
| Minnesota:            |           |          |        |        |               |                         |              |       |        |         |               |             |              |              |        |               |
| Experiment station 1. | 1905-1907 | 115.5    | .....  | .....  | .....         | 44.3                    | 31.4         | 2.4   | .....  | .....   | .....         | .....       | .....        | 18.06        | 10.84  | 1.72          |
| Rice County 1.        | 1908-1912 | 312.6    | .....  | .....  | .....         | 48.4                    | 17.3         | 5.4   | .....  | .....   | .....         | .....       | .....        | 19.95        | .....  | .....         |
| Norman County 1.      | 1908-1912 | 284.6    | .....  | .....  | .....         | 50.3                    | 18.2         | 5.4   | .....  | .....   | .....         | .....       | .....        | 18.01        | .....  | .....         |
| Wisconsin 1.          | 1909-1918 | 648.36   | .....  | .....  | .....         | 46.0                    | 12.5         | 2.5   | .....  | .....   | .....         | .....       | .....        | 22.34        | .....  | .....         |
| New York 1.           | 1915      | 706.33   | 24.1   | 24.9   | 38.3          | 10.2                    | 2.0          | ..... | .....  | .....   | .....         | .....       | .....        | 34.30        | 12.47  | 3.27          |
| Wisconsin 1.          | 1915      | 1,326.96 | 16.6   | 18.6   | 18.6          | 33.2                    | 9.8          | 1.4   | .....  | .....   | .....         | .....       | .....        | 31.76        | 8.76   | 3.36          |
| Iowa 1.               | 1915      | 578.6    | 16.8   | 19.4   | 36.2          | 12.3                    | 1.5          | ..... | .....  | .....   | .....         | .....       | .....        | 23.36        | .....  | 3.01          |

1 New York Bul. 377.

2 U. S. Department of Agriculture, Bureau of Statistics, Bul. 73.

3 Minnesota Bul. 145.

4 Minnesota Bul. 145.

5 Unpublished data in files of U. S. Department of Agriculture.

TABLE 484.—Yearly cost, production, and value of by-products per dairy cow.

| Region.                        | Year.     | Number of cows. | Concentrates. | Total roughage. | Pasture. | Bedding. | Total feed and bedding. | Labor.  | Animal power. | Labor and animal power. | Buildings. | Equipment. | Miscellaneous. | Overhead. |
|--------------------------------|-----------|-----------------|---------------|-----------------|----------|----------|-------------------------|---------|---------------|-------------------------|------------|------------|----------------|-----------|
| Massachusetts <sup>1</sup> .   | 1916-17   | 1,577.5         | \$50.16       | \$53.68         | \$5.98   | \$1.63   | \$111.45                | \$49.58 | \$3.52        | \$53.10                 | \$7.62     | \$1.27     | \$32.86        | .....     |
| Do. <sup>1</sup>               | 1916      | 1,323.0         | 45.79         | 46.19           | 6.47     | 1.01     | 101.46                  | 40.20   | 1.86          | 42.16                   | 6.82       | 1.67       | \$19.16        | .....     |
| Pennsylvania <sup>2</sup> .    | 1910-1913 | 35.0            | 17.76         | 26.25           | 4.30     | 2.46     | 53.77                   | 22.68   | 2.15          | 24.83                   | 6.62       | 2.94       | 2.04           | \$4.91    |
| Maryland <sup>3</sup> .        | 1919      | 1,709.0         | .....         | 20.44           | 20.44    | 5.28     | 147.10                  | .....   | .....         | 54.22                   | 11.54      | 6.04       | \$20.77        | 4.84      |
| Wisconsin <sup>4</sup> .       | 1909-1912 | 1,182.4         | 21.00         | 21.34           | 6.84     | .....    | 49.18                   | 68.62   | 6.57          | 75.19                   | 6.74       | 1.28       | 2.07           | 3.80      |
| Do. <sup>4</sup>               | 1920      | 680.25          | 59.70         | 72.91           | 15.00    | .....    | 147.61                  | .....   | .....         | .....                   | 11.70      | .87        | .....          | .....     |
| Minnesota:                     |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Northfield <sup>7</sup> .      | 1905-1909 | 579.0           | .....         | .....           | .....    | .....    | 27.83                   | .....   | .....         | 18.66                   | 2.46       | .58        | .75            | 2.53      |
| Marshall <sup>7</sup> .        | 1908-1909 | 152.0           | .....         | .....           | .....    | .....    | 21.81                   | .....   | .....         | 15.01                   | 2.46       | .71        | .28            | 1.97      |
| Halslad <sup>7</sup> .         | 1904-1909 | 474.0           | .....         | .....           | .....    | .....    | 20.08                   | .....   | .....         | 18.20                   | 2.46       | .92        | .39            | 2.75      |
| Northfield <sup>8</sup> .      | 1908-1912 | 473.0           | 22.92         | 30.75           | 15.00    | 4.00     | 78.67                   | 34.80   | 6.00          | 40.80                   | 4.11       | .52        | \$23.05        | 2.28      |
| Halslad <sup>8</sup> .         | 1912-1916 | 330.0           | 20.34         | 46.09           | 9.00     | 4.00     | 79.43                   | 32.00   | 2.04          | 34.04                   | 3.81       | 1.01       | \$23.18        | .30       |
| Cokato <sup>8</sup> .          | 1913-1916 | 501.0           | 24.50         | 33.02           | 12.00    | 4.00     | 73.52                   | 31.08   | 5.10          | 30.78                   | 3.00       | .91        | \$26.01        | .61       |
| Nebraska:                      |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Winter season <sup>10</sup> .  | 1917-1920 | 497.1           | .....         | .....           | 3.18     | .....    | .....                   | .....   | .....         | .....                   | 5.48       | 2.81       | 6.25           | .....     |
| Summer season <sup>10</sup> .  | 1917-1920 | 492.3           | .....         | .....           | 18.83    | .....    | .....                   | .....   | .....         | .....                   | 3.53       | 2.84       | 7.80           | .....     |
| Entire year <sup>10</sup> .    | 1917-1920 | 494.7           | .....         | .....           | 22.01    | .....    | .....                   | .....   | .....         | .....                   | 11.01      | 5.65       | 13.61          | .....     |
| Washington:                    |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Winter season <sup>11</sup> .  | 1917-1920 | 1,043.1         | .....         | .....           | 1.70     | .....    | .....                   | .....   | .....         | .....                   | 4.10       | 2.34       | 3.20           | .....     |
| Summer season <sup>11</sup> .  | 1917-1920 | 1,049.3         | .....         | .....           | 21.34    | .....    | .....                   | .....   | .....         | .....                   | 4.07       | 2.33       | 3.08           | .....     |
| Entire year <sup>11</sup> .    | 1917-1920 | 1,046.2         | .....         | .....           | 23.04    | .....    | .....                   | .....   | .....         | .....                   | 8.17       | 4.67       | 7.28           | .....     |
| Louisiana:                     |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Winter season <sup>12</sup> .  | 1918-1920 | 865.9           | .....         | .....           | 2.03     | .....    | .....                   | .....   | .....         | .....                   | 3.23       | 4.50       | 1.19           | .....     |
| Summer season <sup>12</sup> .  | 1918-1920 | 929.4           | .....         | .....           | 2.55     | .....    | .....                   | .....   | .....         | .....                   | 2.07       | 4.14       | 1.15           | .....     |
| Entire year <sup>12</sup> .    | 1918-1920 | 892.6           | .....         | .....           | 3.58     | .....    | .....                   | .....   | .....         | .....                   | 6.40       | 8.64       | 2.34           | .....     |
| North Carolina:                |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Winter season <sup>13</sup> .  | 1915-1917 | .....           | .....         | .....           | .29      | .19      | .....                   | .....   | .....         | .....                   | 3.97       | 5.01       | .55            | .....     |
| Summer season <sup>13</sup> .  | 1915-1917 | .....           | .....         | .....           | 4.60     | .....    | .....                   | .....   | .....         | .....                   | 5.61       | 4.54       | .50            | .....     |
| Entire year <sup>13</sup> .    | 1915-1917 | 557.0           | .....         | .....           | 5.28     | .19      | .....                   | .....   | .....         | .....                   | 7.58       | 9.55       | 1.05           | .....     |
| North Carolina <sup>13</sup> . | 1908-1914 | 98.1            | .....         | .....           | 3.77     | .....    | 68.66                   | .....   | .....         | 23.04                   | 6.38       | 3.22       | .66            | 7.64      |
| Indiana:                       |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Winter season <sup>14</sup> .  | 1915-1917 | 740.0           | .....         | .....           | 1.35     | .....    | .....                   | .....   | .....         | .....                   | 4.12       | 2.53       | 1.55           | .....     |
| Summer season <sup>14</sup> .  | 1915-1917 | 734.8           | .....         | .....           | 1.36     | .....    | .....                   | .....   | .....         | .....                   | 4.14       | 2.55       | 1.56           | .....     |
| Entire year <sup>14</sup> .    | 1915-1917 | 737.5           | .....         | .....           | .....    | .....    | .....                   | .....   | .....         | .....                   | 8.27       | 5.00       | 3.12           | .....     |
| New Jersey:                    |           |                 |               |                 |          |          |                         |         |               |                         |            |            |                |           |
| Sussex County <sup>15</sup> .  | 1921      | 15 herds.       | 51.54         | 45.61           | 8.00     | .....    | 105.05                  | 57.34   | 4.00          | 61.34                   | 10.16      | .75        | 16.29.33       | 9.90      |
| North Jersey <sup>15</sup> .   | 1921      | 15 herds.       | 53.71         | 43.83           | 16.78    | 11.33    | 125.65                  | 54.64   | 3.27          | 57.81                   | 10.70      | 3.30       | 10.72.49       | 6.97      |
| Michigan <sup>16</sup> .       | 1900-1912 | 206.9           | 33.80         | 30.14           | 1.69     | .....    | 71.72                   | 29.53   | 2.56          | 32.00                   | 3.98       | 2.61       | 1.95           | .....     |

| Region.                      | Year.     | Interest. | Depre-<br>ciation. | Cost of<br>bull. | Total<br>other<br>costs. | All costs. | Credits. |         |                     |         | Net<br>costs. | Average<br>pounds<br>of milk. | Net cost,<br>per 100<br>pounds<br>milk. |
|------------------------------|-----------|-----------|--------------------|------------------|--------------------------|------------|----------|---------|---------------------|---------|---------------|-------------------------------|---|
|                              |           |           |                    |                  |                          |            | Manure.  | Calves. | Miscella-<br>neous. | Total.  |               |                               |   |
| Massachusetts <sup>1</sup>   | 1910-17   | \$6.09    | \$12.73            | \$3.09           | \$53.06                  | \$218.21   | \$17.82  | \$7.91  | \$7.17              | \$32.90 | \$185.31      | 6,760                         | \$2.74                                  |
| Do. 1                        | 1916      | 4.40      | 6.91               | 3.40             | 22.86                    | 148.48     | 16.40    | 5.30    | 7.51                | 29.50   | 156.88        | 5,600                         | 2.85                                    |
| Pennsylvania <sup>2</sup>    | 1910-1913 | 2.07      | 5.13               | 1.37             | 24.59                    | 102.10     | 10.27    | 1.16    | .84                 | 12.27   | 90.92         | 5,348                         | 1.70                                    |
| Maryland <sup>3</sup>        | 1909-1912 | 6.56      | 1.70               | 1.92             | 30.01                    | 247.02     | 10.47    | 4.76    | .16                 | 15.38   | 231.53        | 6,074                         | 3.52                                    |
| Wisconsin <sup>4</sup>       | 1909-1912 | 3.70      | 9.00               | 1.92             | 30.13                    | 101.57     | 21.25    | 5.00    |                     | 26.25   | 86.19         | 5,240                         | 1.64                                    |
| Do. 5                        | 1920      | 13.15     | 9.00               |                  | 30.42                    | 202.22     |          |         |                     | 21.25   | 240.97        | 7,300                         | 3.30                                    |
| Minnesota:                   |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Norfolk <sup>6</sup>         | 1905-1909 | 2.34      | 3.19               | 1.08             | 13.83                    | 60.02      |          |         |                     |         |               | 5,232                         |   |
| Marshall <sup>7</sup>        | 1906-1909 | 1.51      | .30                | 2.08             | 9.37                     | 46.10      |          |         |                     |         |               | 4,113                         |   |
| Halsall <sup>8</sup>         | 1904-1909 | 1.51      | .30                | 2.08             | 10.75                    | 49.03      |          |         |                     |         |               | 4,182                         |   |
| Norfolk <sup>9</sup>         | 1908-1912 | 1.51      | .30                | 2.08             | 30.58                    | 170.43     | 20.00    | 5.00    |                     | 25.00   | 134.43        | 5,540                         | 2.43                                    |
| Radford <sup>10</sup>        | 1912-1916 |           |                    | 4.00             | 34.36                    | 147.83     | 20.00    | 5.00    |                     | 25.00   | 122.83        | 4,840                         | 2.53                                    |
| Catawba <sup>11</sup>        | 1913-1916 |           |                    | 4.00             | 33.13                    | 145.43     | 20.00    | 5.00    |                     | 25.00   | 120.43        | 4,944                         | 2.44                                    |
| Nebraska:                    |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Winter season <sup>12</sup>  | 1917-1920 | 3.93      | 2.38               | 4.64             | 25.40                    |            |          |         |                     |         |               | 2,958                         |   |
| Summer season <sup>13</sup>  | 1917-1920 | 3.96      | 2.40               | 3.55             | 25.64                    |            |          |         |                     |         |               | 2,885                         |   |
| Entire year <sup>14</sup>    | 1917-1920 | 7.89      | 4.78               | 8.19             | 51.03                    |            |          |         |                     |         |               | 5,823                         |   |
| Washington:                  |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Winter season <sup>15</sup>  | 1917-1920 | 3.62      | 2.30               | 2.44             | 18.00                    |            |          |         |                     |         |               | 3,217                         |   |
| Summer season <sup>16</sup>  | 1917-1920 | 3.60      | 2.29               | 1.94             | 18.31                    |            |          |         |                     |         |               | 4,013                         |   |
| Entire year <sup>17</sup>    | 1917-1920 | 7.22      | 4.59               | 4.38             | 36.31                    |            |          |         |                     |         |               | 7,233                         |   |
| Louisiana:                   |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Winter season <sup>18</sup>  | 1918-1920 | 2.95      | 2.92               | 1.08             | 15.97                    |            |          |         |                     |         |               | 1,309                         |   |
| Summer season <sup>19</sup>  | 1918-1920 | 2.72      | 2.69               | .66              | 14.43                    |            |          |         |                     |         |               | 1,797                         |   |
| Entire year <sup>20</sup>    | 1918-1920 | 5.67      | 5.61               | 1.74             | 30.40                    |            |          |         |                     |         |               | 3,105                         |   |
| North Carolina:              |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Winter season <sup>21</sup>  | 1915-1917 | 2.02      |                    | 1.75             | 13.30                    |            | 7.06     | 3.00    | 2.62                | 13.58   |               | 2,478.6                       |   |
| Summer season <sup>22</sup>  | 1915-1917 | 1.83      |                    | 1.50             | 12.07                    |            | 5.38     | 2.72    | 2.33                | 10.48   |               | 2,437.7                       |   |
| Entire year <sup>23</sup>    | 1915-1917 | 3.85      |                    | 3.24             | 25.37                    |            | 13.34    | 5.72    | 5.00                | 24.06   |               | 4,916.3                       |   |
| North Carolina <sup>24</sup> | 1908-1914 | 5.72      | 3.52               | 3.52             | 30.56                    | 127.76     |          |         |                     |         |               | 5,142                         |   |
| Indiana:                     |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Winter season <sup>25</sup>  | 1915-1917 | 2.55      | .60                | 2.32             | 13.67                    |            |          |         |                     |         |               | 3,510                         |   |
| Summer season <sup>26</sup>  | 1915-1917 | 2.57      | .60                | 1.97             | 13.30                    |            |          |         |                     |         |               | 3,397                         |   |
| Entire year <sup>27</sup>    | 1915-1917 | 5.14      | 1.20               | 4.29             | 27.11                    |            |          |         |                     |         |               | 6,937                         |   |
| New Jersey:                  |           |           |                    |                  |                          |            |          |         |                     |         |               |                               |   |
| Sussex County <sup>28</sup>  | 1921      | 8.28      | 11.04              | 4.43             | 63.99                    | 220.38     | 12.00    | 14.59   |                     | 26.59   | 203.79        | 6,400                         | 3.14                                    |
| South Jersey <sup>29</sup>   | 1921      | 8.52      | 11.36              | 7.13             | 92.20                    | 275.68     | 26.40    | 11.30   |                     | 37.70   | 237.87        | 7,546                         | 3.15                                    |
| Michigan <sup>30</sup>       | 1909-1912 | 3.22      | .99                | 2.87             | 21.59                    | 125.40     | 15.42    | 4.52    | .38                 | 20.32   | 105.08        | 6,536                         | 1.61                                    |

<sup>1</sup> Massachusetts Exl. Bul. 19.<sup>2</sup> Includes insurance, taxes, risk, and managerial charges.<sup>3</sup> U. S. Department of Agriculture Bul. 501.<sup>4</sup> Preliminary Report on Cost of Producing Milk in North-<sup>5</sup> Includes insurance, taxes, veterinary fees, cow testings,<sup>6</sup> disinfestants, registration, and transportation costs.<sup>7</sup> Includes interest, insurance, taxes, depreciation, and<sup>8</sup> managerial charges.<sup>9</sup> Unpublished data in files of the U. S. Department of<sup>10</sup> Agriculture.<sup>11</sup> U. S. Department of Agriculture, Bureau of Statistics,<sup>12</sup> Bul. 88.<sup>13</sup> Minnesota Bul. 173.<sup>14</sup> Includes interest, insurance, taxes, depreciation, and<sup>15</sup> managerial charges.<sup>16</sup> U. S. Department of Agriculture Bul. 972.<sup>17</sup> U. S. Department of Agriculture Bul. 919.<sup>18</sup> U. S. Department of Agriculture Bul. 955.<sup>19</sup> North Carolina Department of Agriculture Bul. 266.<sup>20</sup> U. S. Department of Agriculture Bul. 588.<sup>21</sup> U. S. Department of Agriculture, Oct., 1921.<sup>22</sup> New Jersey Agriculture, taxes, insurance, etc.

TABLE 485.—Yearly feed, bedding, and man and horse labor requirements per cow in dairy herd.<sup>1</sup>

| Region.             | Year.     | Labor. | Animal power. | Concentrates. |             |        | Roughage. |            |        |        |          |
|---------------------|-----------|--------|---------------|---------------|-------------|--------|-----------|------------|--------|--------|----------|
|                     |           |        |               | Purchased.    | Home grown. | Total. | Dry.      | Succulent. |        | Total. | Bedding. |
|                     |           |        |               |               |             |        |           | Silage.    | Other. |        |          |
|                     |           | Hrs.   | Hrs.          | Lbs.          | Lbs.        | Lbs.   | Lbs.      | Lbs.       | Lbs.   | Lbs.   | Lbs.     |
| Massachusetts.....  | 1916-1917 | 185    | 17            | .....         | .....       | 2,662  | 4,075     | 7,817      | .....  | 11,892 | .....    |
| Do.....             | 1916      | 150    | 9             | .....         | .....       | 2,480  | 4,879     | 5,964      | .....  | 10,363 | .....    |
| Pennsylvania.....   | 1919-1913 | 170    | 21            | .....         | .....       | 1,423  | 2,303     | 8,311      | .....  | 10,619 | .....    |
| Maryland.....       | 1919      | 201.3  | 29.6          | 1,747         | 512         | 2,259  | 4,848     | 6,320      | .....  | 11,163 | .....    |
| Wisconsin.....      | 1909-1912 | 214    | 33            | .....         | .....       | 1,605  | 1,907     | 7,081      | .....  | 8,988  | .....    |
| Do.....             | 1920      | .....  | .....         | 1,100         | 990         | 2,090  | 2,440     | 7,590      | 595    | 10,625 | .....    |
| Minnesota:          |           |        |               |               |             |        |           |            |        |        |          |
| Northfield.....     | 1905-1909 | 132.7  | 35.1          | 320           | 538         | 864    | .....     | 5,590      | .....  | 5,590  | .....    |
| Marshall.....       | 1906-1909 | 92.4   | 22.4          | 209           | 789         | 998    | .....     | 4,028      | .....  | 4,028  | .....    |
| Halstad.....        | 1904-1909 | 137.2  | 17.4          | 46            | 722         | 768    | .....     | 5,531      | .....  | 5,531  | .....    |
| Northfield.....     | 1908-1912 | 145    | 40            | .....         | .....       | 1,058  | 3,917     | 4,020      | .....  | 7,937  | .....    |
| Halstad.....        | 1912-1916 | 160    | 17            | .....         | .....       | 886    | 4,843     | 2,993      | .....  | 7,836  | .....    |
| Cokato.....         | 1913-1916 | 132    | 34            | .....         | .....       | 1,119  | 3,972     | .....      | .....  | 3,972  | .....    |
| Nebraska:           |           |        |               |               |             |        |           |            |        |        |          |
| Winter season.....  | 1917-1920 | 58.2   | 1.9           | 129           | 1,082       | 1,211  | 2,798     | 2,749      | .....  | 5,547  | 325      |
| Summer season.....  | 1917-1920 | 55.4   | 2.3           | 34            | 284         | 318    | 1,477     | 844        | .....  | 2,321  | 15       |
| Entire year.....    | 1917-1920 | 113.6  | 4.2           | 163           | 1,366       | 1,529  | 4,275     | 3,593      | .....  | 7,565  | 340      |
| Washington:         |           |        |               |               |             |        |           |            |        |        |          |
| Winter season.....  | 1917-1920 | 60.1   | .29           | 711           | 235         | 946    | 2,900     | 4,610      | .....  | 7,600  | 289      |
| Summer season.....  | 1917-1920 | 60.9   | .67           | 214           | 27          | 241    | 346       | 1,864      | .....  | 2,210  | 6        |
| Entire year.....    | 1917-1920 | 121    | 1.00          | 925           | 262         | 1,187  | 3,336     | 6,474      | .....  | 9,810  | 295      |
| Louisiana:          |           |        |               |               |             |        |           |            |        |        |          |
| Winter season.....  | 1918-1920 | 75.3   | 11.6          | 927           | 22          | 949    | 503       | 1,026      | .....  | 1,528  | 4        |
| Summer season.....  | 1918-1920 | 59.2   | 12.1          | 929           | 5           | 944    | 35        | 145        | .....  | 180    | .....    |
| Entire year.....    | 1918-1920 | 164.5  | 23.7          | 1,866         | 27          | 1,893  | 538       | 1,171      | .....  | 1,709  | 4        |
| North Carolina:     |           |        |               |               |             |        |           |            |        |        |          |
| Winter season.....  | 1915-1917 | 173.2  | 44            | 1,394         | 40          | 1,434  | 1,945     | 4,499      | .....  | 6,444  | .....    |
| Summer season.....  | 1915-1917 | 163.1  | 42.7          | 1,161         | 19          | 1,180  | 599       | 2,121      | .....  | 3,020  | .....    |
| Entire year.....    | 1915-1917 | 336.3  | 86.7          | 2,555         | 59          | 2,614  | 2,544     | 6,620      | .....  | 9,464  | .....    |
| North Carolina..... | 1908-1914 | 262    | 55            | .....         | .....       | 2,320  | 4,298     | 3,567      | .....  | 8,165  | .....    |
| Indiana:            |           |        |               |               |             |        |           |            |        |        |          |
| Winter season.....  | 1915-1917 | 90.1   | 8.9           | 707           | 659         | 1,368  | 2,365     | 5,224      | .....  | 7,589  | 720      |
| Summer season.....  | 1915-1917 | 74.4   | 7.4           | 491           | 187         | 678    | 930       | 2,042      | .....  | 2,972  | .....    |
| Entire year.....    | 1915-1917 | 164.5  | 16.2          | 1,198         | 848         | 2,046  | 3,301     | 7,276      | .....  | 10,577 | 720      |
| New Jersey:         |           |        |               |               |             |        |           |            |        |        |          |
| Sussex County.....  | 1921      | 182.6  | 20.1          | .....         | .....       | 2,577  | 3,832     | 2,075      | .....  | 5,907  | .....    |
| South Jersey.....   | 1921      | 202    | 16.3          | .....         | .....       | 2,597  | 3,394     | 6,392      | .....  | 9,785  | .....    |
| Michigan.....       | 1939-1912 | 230    | 32            | .....         | .....       | 2,855  | 3,663     | 11,638     | .....  | 14,301 | .....    |

<sup>1</sup> For number of cows and production per cow, see Table 484 (yearly cost, production, and value of by-products per dairy cow).



TABLE 486.—Quantities of feed and labor used in the production of 100 pounds gain on beef cattle in the feed lot.

## 2-YEAR-OLD STEERS.

| State.             | Year.   | Number. |         | Man labor. | Animal power. | Total gain. | Corn. | Oats. | Barley. | Cottonseed meal. | Linsed-oil meal. | Molasses. | Miscellaneous con-<br>centrates. | Total com<br>nitrates. | Clover hay. | Alfalfa hay. | Timothy hay. | Mixed hay. | Wild hay. | Fodder. | Straw. | Total dry rough-<br>age. | Silage. | Total roughage. | Acres stalks. | Acres stover. | Pasture days. |
|--------------------|---------|---------|---------|------------|---------------|-------------|-------|-------|---------|------------------|------------------|-----------|----------------------------------|------------------------|-------------|--------------|--------------|------------|-----------|---------|--------|--------------------------|---------|-----------------|---------------|---------------|---------------|
|                    |         | Droves. | Cattle. |            |               |             |       |       |         |                  |                  |           |                                  |                        |             |              |              |            |           |         |        |                          |         |                 |               |               |               |
| Burt County, Nebr. | 1916-17 | 44      | 1,264   | 3.1        | 3.9           | 270         | 784   | 3     | ...     | 20               | ...              | ...       | 20                               | 20                     | ...         | ...          | ...          | 572        | ...       | ...     | 122    | 694                      | 28      | 722             | 10            | 01            | 7             |
|                    | 1916-17 | 32      | 1,138   | 2.2        | 2.6           | 300         | 842   | 3     | ...     | 14               | ...              | ...       | 12                               | 26                     | ...         | ...          | ...          | 389        | ...       | ...     | 72     | 401                      | 60      | 527             | 06            | 01            | 9             |
|                    | 1916-17 | 20      | 1,177   | 3.0        | 4.1           | 265         | 489   | 25    | ...     | 42               | ...              | ...       | 42                               | 42                     | ...         | ...          | ...          | 237        | ...       | ...     | 180    | 397                      | 1,072   | 1,409           | 20            | 02            | 33            |
|                    | 1916-17 | 20      | 2,777   | 2.3        | 5.4           | 359         | 848   | 4     | ...     | 36               | 93               | 139       | 139                              | 139                    | ...         | ...          | ...          | 118        | ...       | ...     | 80     | 166                      | ...     | 1,103           | 03            | 20            | 39            |
|                    | 1916-17 | 28      | 2,695   | 2.9        | 4.8           | 271         | 645   | 15    | ...     | 92               | 1                | 93        | 93                               | 93                     | ...         | ...          | ...          | 95         | ...       | ...     | 128    | 238                      | 876     | 1,000           | 33            | 11            | 35            |
|                    | 1916-17 | 8       | 490     | 2.7        | 3.9           | 325         | 675   | ...   | ...     | ...              | 113              | 43        | 156                              | 156                    | ...         | ...          | ...          | 382        | ...       | ...     | 17     | 359                      | 120     | 519             | 03            | 04            | 30            |

## YEARLINGS—(ALL PURCHASED).

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TABLE 488.—Quantities of feed and labor used in the production of 100 pounds gain on beef cattle in the feed lot—Continued.

CATTLE OF ALL AGES.

| State.    | Year.   | Number. |         | Man labor. | Animal power. | Total gain. | Corn. | Oats. | Barley. | Cottonseed meal. | Linseed-oil meal. | Miscellaneous concentrates. | Clover hay. | Alfalfa hay. | Timothy hay. | Mixed hay. | Wild hay. | Fodder. | Straw. | Total dry roughage. | Silage. | Total roughage. | Acres stalks. | Acres stover. | Pasture days. |     |    |
|-----------|---------|---------|---------|------------|---------------|-------------|-------|-------|---------|------------------|-------------------|-----------------------------|-------------|--------------|--------------|------------|-----------|---------|--------|---------------------|---------|-----------------|---------------|---------------|---------------|-----|----|
|           |         | Droves. | Cattle. |            |               |             |       |       |         |                  |                   |                             |             |              |              |            |           |         |        |                     |         |                 |               |               |               |     |    |
|           |         |         |         |            |               |             |       |       |         |                  |                   |                             |             |              |              |            |           |         |        |                     |         |                 |               |               |               |     |    |
| Nebraska. | 1918-19 | 70      | 2,293   | 4.8        | 3.9           | 295         | 905   | 40    | ...     | ...              | 11                | 4                           | 1           | 16           | 49           | 348        | ...       | 30      | 70     | 3                   | 272     | 702             | 137           | 103           | ...           | 13  |    |
|           | 1919-20 | 113     | 3,990   | 3.3        | 2.8           | 272         | 815   | 18    | 20      | 15               | 18                | 38                          | 7           | 73           | 86           | 72         | 9         | 123     | 5      | 100                 | 474     | 171             | 253           | ...           | 11            |     |    |
|           | 1920-21 | 134     | 5,534   | 2.9        | 2.4           | 295         | 815   | 18    | 20      | 15               | 18                | 38                          | 7           | 73           | 86           | 72         | 9         | 123     | 5      | 100                 | 474     | 171             | 253           | ...           | 11            |     |    |
|           | 1921-22 | 134     | 5,534   | 2.9        | 2.4           | 295         | 815   | 18    | 20      | 15               | 18                | 38                          | 7           | 73           | 86           | 72         | 9         | 123     | 5      | 100                 | 474     | 171             | 253           | ...           | 11            |     |    |
|           | 1922-23 | 134     | 5,534   | 2.9        | 2.4           | 295         | 815   | 18    | 20      | 15               | 18                | 38                          | 7           | 73           | 86           | 72         | 9         | 123     | 5      | 100                 | 474     | 171             | 253           | ...           | 11            |     |    |
| Iowa.     | 1918-19 | 72      | 2,068   | 4.9        | 4.0           | 295         | 802   | 18    | ...     | ...              | 35                | 4                           | ...         | 18           | 58           | 18         | ...       | ...     | ...    | ...                 | 120     | 173             | 293           | ...           | ...           | 9   |    |
|           | 1919-20 | 90      | 3,473   | 4.8        | 3.9           | 344         | 891   | 14    | 1       | 79               | ...               | 23                          | 41          | 32           | 0            | ...        | ...       | ...     | ...    | ...                 | 312     | 418             | 730           | ...           | ...           | 9   |    |
|           | 1920-21 | 106     | 5,139   | 4.2        | 3.5           | 344         | 891   | 14    | 1       | 79               | ...               | 23                          | 41          | 32           | 0            | ...        | ...       | ...     | ...    | ...                 | 312     | 418             | 730           | ...           | ...           | 9   |    |
|           | 1921-22 | 106     | 5,139   | 4.2        | 3.5           | 344         | 891   | 14    | 1       | 79               | ...               | 23                          | 41          | 32           | 0            | ...        | ...       | ...     | ...    | ...                 | 312     | 418             | 730           | ...           | ...           | 9   |    |
|           | 1922-23 | 106     | 5,139   | 4.2        | 3.5           | 344         | 891   | 14    | 1       | 79               | ...               | 23                          | 41          | 32           | 0            | ...        | ...       | ...     | ...    | ...                 | 312     | 418             | 730           | ...           | ...           | 9   |    |
| Indiana.  | 1918-19 | 49      | 1,640   | 3.9        | 3.2           | 267         | 754   | 19    | ...     | ...              | 83                | 26                          | ...         | 17           | 10           | 58         | 1         | 41      | ...    | ...                 | 315     | 398             | 713           | ...           | ...           | 50  |    |
|           | 1919-20 | 125     | 3,857   | 3.0        | 2.6           | 270         | 754   | 19    | ...     | ...              | 4                 | 1                           | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 18  |    |
|           | 1920-21 | 134     | 5,534   | 2.6        | 2.1           | 326         | 808   | 18    | ...     | ...              | 4                 | 15                          | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 17  |    |
|           | 1921-22 | 134     | 5,534   | 2.6        | 2.1           | 326         | 808   | 18    | ...     | ...              | 4                 | 15                          | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 17  |    |
|           | 1922-23 | 134     | 5,534   | 2.6        | 2.1           | 326         | 808   | 18    | ...     | ...              | 4                 | 15                          | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 17  |    |
| Missouri. | 1918-19 | 107     | 3,077   | 3.5        | 3.0           | 257         | 518   | 8     | 1       | 41               | ...               | 15                          | 30          | ...          | 14           | ...        | ...       | ...     | ...    | ...                 | 219     | 249             | 465           | ...           | ...           | 10  |    |
|           | 1919-20 | 130     | 4,154   | 3.3        | 2.7           | 257         | 518   | 8     | 1       | 41               | ...               | 15                          | 30          | ...          | 14           | ...        | ...       | ...     | ...    | ...                 | 219     | 249             | 465           | ...           | ...           | 10  |    |
|           | 1920-21 | 134     | 5,534   | 2.6        | 2.1           | 326         | 808   | 18    | ...     | ...              | 4                 | 15                          | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 17  |    |
|           | 1921-22 | 134     | 5,534   | 2.6        | 2.1           | 326         | 808   | 18    | ...     | ...              | 4                 | 15                          | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 17  |    |
|           | 1922-23 | 134     | 5,534   | 2.6        | 2.1           | 326         | 808   | 18    | ...     | ...              | 4                 | 15                          | ...         | 19           | 43           | 149        | 3         | 89      | 7      | ...                 | 699     | 98              | 797           | ...           | ...           | 17  |    |
| Nebraska. | 1920-21 | 95      | 2,827   | 3.8        | 3.1           | 399         | 899   | 9     | 1       | ...              | 3                 | ...                         | ...         | 61           | 344          | ...        | 43        | 37      | 2      | 222                 | 999     | 38              | 737           | ...           | ...           | 11  |    |
|           | 1921-22 | 113     | 3,934   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | 375     | 79              | 454           | ...           | ...           | 19  |    |
|           | 1922-23 | 113     | 3,934   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | 375     | 79              | 454           | ...           | ...           | 19  |    |
|           | 1923-24 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | 375     | 79              | 454           | ...           | ...           | 19  |    |
|           | 1924-25 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | 375     | 79              | 454           | ...           | ...           | 19  |    |
| Iowa.     | 1920-21 | 86      | 2,896   | 4.0        | 3.2           | 270         | 871   | 12    | ...     | ...              | 17                | 4                           | ...         | 55           | 63           | 17         | ...       | ...     | ...    | ...                 | 948     | 1,771           | 2,709         | ...           | ...           | 11  |    |
|           | 1921-22 | 106     | 5,139   | 4.2        | 3.5           | 270         | 871   | 12    | ...     | ...              | 17                | 4                           | ...         | 55           | 63           | 17         | ...       | ...     | ...    | ...                 | 948     | 1,771           | 2,709         | ...           | ...           | 11  |    |
|           | 1922-23 | 106     | 5,139   | 4.2        | 3.5           | 270         | 871   | 12    | ...     | ...              | 17                | 4                           | ...         | 55           | 63           | 17         | ...       | ...     | ...    | ...                 | 948     | 1,771           | 2,709         | ...           | ...           | 11  |    |
|           | 1923-24 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | ...     | 948             | 1,771         | 2,709         | ...           | ... | 11 |
|           | 1924-25 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | ...     | 948             | 1,771         | 2,709         | ...           | ... | 11 |
| Indiana.  | 1920-21 | 86      | 2,896   | 4.0        | 3.2           | 270         | 871   | 12    | ...     | ...              | 17                | 4                           | ...         | 55           | 63           | 17         | ...       | ...     | ...    | ...                 | 948     | 1,771           | 2,709         | ...           | ...           | 11  |    |
|           | 1921-22 | 106     | 5,139   | 4.2        | 3.5           | 270         | 871   | 12    | ...     | ...              | 17                | 4                           | ...         | 55           | 63           | 17         | ...       | ...     | ...    | ...                 | 948     | 1,771           | 2,709         | ...           | ...           | 11  |    |
|           | 1922-23 | 106     | 5,139   | 4.2        | 3.5           | 270         | 871   | 12    | ...     | ...              | 17                | 4                           | ...         | 55           | 63           | 17         | ...       | ...     | ...    | ...                 | 948     | 1,771           | 2,709         | ...           | ...           | 11  |    |
|           | 1923-24 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | ...     | 948             | 1,771         | 2,709         | ...           | ... | 11 |
|           | 1924-25 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | ...     | 948             | 1,771         | 2,709         | ...           | ... | 11 |
| Missouri. | 1920-21 | 105     | 5,139   | 4.2        | 3.5           | 342         | 707   | 2     | ...     | ...              | 31                | 4                           | ...         | 124          | 21           | ...        | 25        | ...     | 104    | 53                  | 328     | 513             | 841           | ...           | ...           | 38  |    |
|           | 1921-22 | 105     | 5,139   | 4.2        | 3.5           | 342         | 707   | 2     | ...     | ...              | 31                | 4                           | ...         | 124          | 21           | ...        | 25        | ...     | 104    | 53                  | 328     | 513             | 841           | ...           | ...           | 38  |    |
|           | 1922-23 | 105     | 5,139   | 4.2        | 3.5           | 342         | 707   | 2     | ...     | ...              | 31                | 4                           | ...         | 124          | 21           | ...        | 25        | ...     | 104    | 53                  | 328     | 513             | 841           | ...           | ...           | 38  |    |
|           | 1923-24 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | ...     | 513             | 841           | ...           | ...           | 38  |    |
|           | 1924-25 | 134     | 5,534   | 2.3        | 1.5           | 353         | 891   | 18    | 1       | 2                | 3                 | 9                           | 14          | 74           | 138          | 5          | 26        | ...     | ...    | ...                 | ...     | 513             | 841           | ...           | ...           | 38  |    |

Data on 2-year old steers, yearlings, and baby beef, taken from Meat Packing Industry, Part VI, of the Federal Trade Commission.  
Data on cattle since 1918-19 from unpublished material of the United States Department of Agriculture.

TABLE 457.—Cost of fattening cattle in sections of the Corn Belt.

[Per head feed lot cost.]  
2-YEAR-OLD CATTLE.

| State.              | Winter. | Proven. | Cattle. | Feeding period<br>days. | Daily gain<br>pounds. | Feed    | Labor  | Buildings and<br>equipment. | Risk. | Veterinary. | Insurance. | Taxes. | Incidentals | Miscellaneous | Interest. | Marketing ex-<br>pense. | Total cost. | Manure. | Profit | Total credit. | Net cost. | Average gain<br>pounds. | No. of<br>cows per<br>acre. |
|---------------------|---------|---------|---------|-------------------------|-----------------------|---------|--------|-----------------------------|-------|-------------|------------|--------|-------------|---------------|-----------|-------------------------|-------------|---------|--------|---------------|-----------|-------------------------|-----------------------------|
| Burt County, Nebr.  | 1916-17 | 44      | 1,984   | 115                     | 2.03                  | \$48.30 | \$2.11 | \$2.57                      |       |             |            |        |             | \$1.31        | \$2.48    | \$2.04                  | \$59.87     | \$2.34  | \$8.28 | \$10.62       | \$16.25   | 270                     | 18.19                       |
| Pott. County, Iowa. | 1916-17 | 52      | 1,735   | 114                     | 2.34                  | 74.45   | 2.15   | 2.59                        |       |             |            |        |             | 1.01          | 2.78      | 1.87                    | 65.25       | 1.54    | 9.15   | 10.69         | 54.56     | 300                     | 18.19                       |
| Eastern Iowa.       | 1916-17 | 50      | 1,737   | 201                     | 1.31                  | 68.77   | 2.75   | 2.79                        |       |             |            |        |             | 1.07          | 3.32      | 2.90                    | 61.69       | 2.94    | 4.42   | 7.46          | 54.31     | 205                     | 30.50                       |
| Clinton, Mo.        | 1916-17 | 26      | 2,777   | 208                     | 1.30                  | 65.98   | 3.50   | 1.75                        |       |             |            |        |             | 1.74          | 3.04      | 2.28                    | 101.31      | 0.66    | 17.91  | 17.07         | 84.44     | 379                     | 23.21                       |
| Saline County, Mo.  | 1916-17 | 28      | 2,608   | 208                     | 1.30                  | 62.75   | 3.50   | 1.07                        |       |             |            |        |             | 1.37          | 3.60      | 2.65                    | 66.23       | .35     | 8.49   | 8.64          | 57.39     | 271                     | 21.18                       |
| Carroll County, Mo. | 1916-17 | 8       | 490     | 201                     | 1.61                  | 50.70   | 2.43   | 1.90                        |       |             |            |        |             | .70           | 3.49      | 2.52                    | 61.80       | .61     | 10.47  | 11.08         | 50.72     | 425                     | 15.61                       |

## YEARLINGS.

|                     |         |    |     |     |      |         |        |        |  |  |  |  |  |        |        |        |         |        |         |         |         |     |         |
|---------------------|---------|----|-----|-----|------|---------|--------|--------|--|--|--|--|--|--------|--------|--------|---------|--------|---------|---------|---------|-----|---------|
| Burt County, Nebr.  | 1916-17 | 13 | 380 | 138 | 1.90 | \$52.04 | \$2.54 | \$2.32 |  |  |  |  |  | \$2.06 | \$2.51 | \$1.90 | \$53.37 | \$2.61 | \$11.79 | \$14.40 | \$18.97 | 297 | \$16.71 |
| Pott. County, Iowa. | 1916-17 | 13 | 472 | 193 | 1.90 | 64.31   | 2.97   | 2.74   |  |  |  |  |  | 1.46   | 3.24   | 1.83   | 76.55   | 1.82   | 12.58   | 14.10   | 62.43   | 303 | 17.50   |
| Eastern Iowa.       | 1916-17 | 9  | 209 | 293 | 1.30 | 54.67   | 3.32   | 4.94   |  |  |  |  |  | 1.02   | 4.12   | 1.64   | 66.71   | 4.39   | 8.90    | 8.29    | 61.42   | 381 | 16.12   |
| Missouri.           | 1916-17 | 12 | 489 | 251 | 1.40 | 62.46   | 3.47   | 1.63   |  |  |  |  |  | .82    | 3.48   | 2.06   | 63.89   | .32    | 12.02   | 12.84   | 51.55   | 580 | 14.52   |

## BABY BEEVES.

|           |         |    |     |     |      |         |        |        |  |  |  |  |  |        |        |        |         |        |        |        |         |     |         |
|-----------|---------|----|-----|-----|------|---------|--------|--------|--|--|--|--|--|--------|--------|--------|---------|--------|--------|--------|---------|-----|---------|
| Nebraska. | 1916-17 | 15 | 454 | 181 | 1.70 | \$46.10 | \$3.46 | \$2.44 |  |  |  |  |  | \$0.84 | \$2.32 | \$1.75 | \$36.90 | \$1.50 | \$6.44 | \$7.04 | \$48.96 | 302 | \$16.21 |
| Iowa.     | 1916-17 | 10 | 250 | 187 | 1.80 | 52.24   | 2.51   | 2.10   |  |  |  |  |  | .63    | 3.12   | 2.06   | 61.65   | 1.55   | 7.07   | 8.62   | 55.03   | 340 | 15.60   |
| Missouri. | 1916-17 | 8  | 431 | 307 | 1.40 | 56.40   | 3.35   | 1.75   |  |  |  |  |  | .58    | 3.54   | 3.04   | 68.96   | .44    | 3.54   | 5.98   | 62.98   | 437 | 14.41   |

TABLE 487.—Cost of fattening cattle in sections of the Corn Belt—Continued.

[Per head feed lot costs.]

ALL AGES.

| State.    | Winter. | Droves. | Cattle. | Feeding period (days). | Daily gain (pounds). | Feed.   | Labor. | Buildings and equipment. | Risk.  | Veterinary. | Insurance. | Taxes. | Incidentals. | Miscellaneous. | Interest. | Marketing expense. | Total cost. | Manure. | Pork.   | Total credit. | Net cost. | Average gain (pounds). | Net cost per 100 pounds. |
|-----------|---------|---------|---------|------------------------|----------------------|---------|--------|--------------------------|--------|-------------|------------|--------|--------------|----------------|-----------|--------------------|-------------|---------|---------|---------------|-----------|------------------------|--------------------------|
| Nebraska. | 1918-19 | 70      | 2,293   | 176                    | 1.68                 | \$70.69 | \$7.01 | \$1.74                   | \$0.42 | \$0.14      | \$0.04     | \$0.13 | \$0.15       | .....          | \$3.97    | \$2.20             | \$95.94     | \$3.37  | \$14.46 | \$17.83       | \$78.11   | 295                    | \$26.48                  |
| Iowa.     | 1918-19 | 15      | 1,686   | 156                    | 1.75                 | \$83.17 | 4.62   | 1.41                     | 0.32   | 0.12        | 0.06       | 0.28   | 0.37         | .....          | 3.80      | 2.58               | 97.06       | 3.28    | 14.64   | 17.92         | 70.14     | 272                    | 20.10                    |
| Illinois. | 1918-19 | 72      | 2,605   | 163                    | 1.49                 | \$84.57 | 9.19   | 2.64                     | 0.32   | 0.09        | 0.04       | 0.09   | 0.63         | .....          | 4.97      | 2.20               | 105.73      | 10.56   | 11.75   | 22.31         | 83.42     | 295                    | 23.28                    |
| Indiana.  | 1918-19 | 40      | 1,575   | 163                    | 1.38                 | \$73.32 | 5.04   | 2.58                     | 0.74   | 0.14        | 0.15       | 1.76   | 0.66         | .....          | 5.19      | 1.58               | 94.26       | 5.66    | 11.55   | 17.21         | 77.05     | 344                    | 22.40                    |
| Missouri. | 1918-19 | 50      | 2,475   | 163                    | 1.66                 | \$69.81 | 4.89   | 0.66                     | 0.92   | 0.16        | 0.25       | 1.16   | 0.23         | .....          | 3.40      | 2.67               | 73.25       | 0.24    | 9.78    | 7.02          | 63.23     | 298                    | 23.59                    |
| Nebraska. | 1919-20 | 128     | 837     | 165                    | 1.73                 | \$66.84 | 3.80   | 1.48                     | 0.33   | 0.05        | .....      | 0.16   | 0.45         | .....          | 4.06      | 2.44               | 79.61       | 4.61    | 10.23   | 14.84         | 94.77     | 270                    | 23.99                    |
| Iowa.     | 1919-20 | 112     | 4,204   | 184                    | 1.90                 | \$82.30 | 4.13   | 1.70                     | 0.40   | 0.04        | 0.14       | 0.58   | 0.31         | .....          | 4.50      | 2.98               | 97.15       | 4.97    | 16.30   | 21.27         | 75.88     | 325                    | 23.28                    |
| Illinois. | 1919-20 | 108     | 4,697   | 170                    | 1.45                 | \$84.08 | 6.68   | 1.95                     | 0.41   | 0.07        | 0.03       | 0.77   | 0.64         | .....          | 4.33      | 2.23               | 101.19      | 12.25   | 6.91    | 19.16         | 82.03     | 247                    | 33.21                    |
| Indiana.  | 1919-20 | 97      | 2,016   | 168                    | 1.58                 | \$76.09 | 5.88   | 2.21                     | 0.78   | 0.13        | 0.07       | 0.81   | 0.64         | .....          | 5.13      | 2.70               | 94.44       | 10.14   | 11.06   | 21.20         | 73.24     | 290                    | 25.26                    |
| Missouri. | 1919-20 | 100     | 5,184   | 166                    | 1.34                 | \$93.71 | 4.67   | 0.70                     | 0.52   | 0.08        | 0.02       | 0.28   | 0.30         | .....          | 3.55      | 2.96               | 78.88       | 1.98    | 8.22    | 10.20         | 68.68     | 292                    | 26.21                    |
| Nebraska. | 1920-21 | 95      | 2,827   | 166                    | 1.86                 | \$44.17 | 4.29   | 1.39                     | 0.41   | 0.06        | 0.01       | 0.16   | 0.61         | .....          | 4.53      | 4.88               | 50.51       | 1.80    | 5.64    | 7.44          | 43.07     | 309                    | 13.94                    |
| Iowa.     | 1920-21 | 134     | 5,524   | 164                    | 1.83                 | \$65.80 | 3.30   | 1.16                     | 0.57   | 0.04        | 0.08       | 0.54   | 0.35         | .....          | 4.45      | 4.79               | 52.17       | 2.08    | 7.08    | 9.14          | 43.03     | 353                    | 12.19                    |
| Illinois. | 1920-21 | 98      | 2,032   | 174                    | 1.48                 | \$83.17 | 5.73   | 1.19                     | 0.30   | 0.07        | 0.01       | 0.54   | 0.44         | .....          | 5.20      | 2.81               | 54.55       | 5.09    | 2.80    | 7.89          | 46.60     | 258                    | 16.08                    |
| Indiana.  | 1920-21 | 89      | 2,899   | 166                    | 1.63                 | \$84.06 | 5.22   | 1.73                     | 1.04   | 0.06        | 0.01       | 0.61   | 0.45         | .....          | 4.38      | 2.98               | 50.52       | 4.76    | 3.9     | 10.06         | 40.44     | 270                    | 14.98                    |
| Missouri. | 1920-21 | 105     | 5,139   | 262                    | 1.40                 | \$50.19 | 4.65   | 0.37                     | 0.69   | 0.02        | 0.03       | 0.49   | 0.27         | .....          | 4.38      | 5.59               | 66.68       | 0.68    | 5.9     | 9.9           | 60.31     | 352                    | 17.63                    |

Data on 2-year-old cattle, yearlings, and baby beef taken from Meat Packing Industry. Part VI of the Federal Trade Commission.

Data on cattle since 1912-19 from unpublished material of the United States Department of Agriculture.

TABLE 488.—Relative importance of each item of cost of keeping work stock.

| Cost Items.           | New York, western. | Ohio.            |                  |                  | Indiana.         |                    |
|-----------------------|--------------------|------------------|------------------|------------------|------------------|--------------------|
|                       |                    | Scattered farms. | Madison County.  | Seneca County.   | Madison County.  | Montgomery County. |
|                       | <i>Per cent.</i>   | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i>   |
| Feed and bedding..... | 55.8               | 53.5             | 70.9             | 72.0             | 72.0             | 70.3               |
| Chores.....           | 13.5               | 19.1             | 8.1              | 10.2             | 8.8              | 9.4                |
| Depreciation.....     | 11.5               | 12.0             | 8.3              | 6.7              | 6.9              | 8.1                |
| Interest.....         | 3.8                | 4.0              | 2.7              | 2.2              | 2.3              | 2.7                |
| Subtotal.....         | 84.6               | 88.6             | 90.0             | 91.1             | 90.0             | 90.5               |
| Shoeing.....          | 2.8                | 1.6              | 1.6              | 1.7              | 1.6              | 1.3                |
| Stabling.....         | 7.8                | 5.0              | 5.3              | 4.6              | 5.2              | 5.6                |
| Use of equipment..... | 3.5                | 3.5              | 2.8              | 2.3              | 2.6              | 2.0                |
| Miscellaneous.....    | 1.8                | 1.3              | .3               | .3               | .6               | .6                 |
| Total.....            | 100.0              | 100.0            | 100.0            | 100.0            | 100.0            | 100.0              |

| Cost items.           | Illinois.        |                    |                  | Iowa, Iowa County. | Minnesota.       |                  | Wisconsin, southern. |
|-----------------------|------------------|--------------------|------------------|--------------------|------------------|------------------|----------------------|
|                       | West Central.    | Livingston County. | Knox County.     |                    | Southern.        | Steele County.   |                      |
|                       | <i>Per cent.</i> | <i>Per cent.</i>   | <i>Per cent.</i> | <i>Per cent.</i>   | <i>Per cent.</i> | <i>Per cent.</i> | <i>Per cent.</i>     |
| Feed and bedding..... | 59.6             | 72.1               | 73.8             | 67.2               | 58.4             | 69.4             | 52.7                 |
| Chores.....           | 12.1             | 7.9                | 8.0              | 8.4                | 14.4             | 11.5             | 13.4                 |
| Depreciation.....     | 13.7             | 8.3                | 7.4              | 9.5                | 10.7             | 7.8              | 11.0                 |
| Interest.....         | 4.5              | 2.7                | 2.4              | 3.2                | 3.5              | 2.5              | 3.6                  |
| Subtotal.....         | 89.9             | 91.0               | 91.6             | 88.3               | 88.0             | 91.2             | 87.7                 |
| Shoeing.....          | .7               | .7                 | .8               | .4                 | .4               | .5               | 3.1                  |
| Stabling.....         | 4.3              | 4.5                | 4.4              | 7.2                | 6.2              | 4.5              | 6.2                  |
| Use of equipment..... | 2.3              | 2.8                | 2.7              | 2.7                | 4.1              | 2.7              | 2.5                  |
| Miscellaneous.....    | 1.8              | 1.0                | .5               | 1.4                | 1.3              | 1.1              | .5                   |
| Total.....            | 100.0            | 100.0              | 100.0            | 100.0              | 100.0            | 100.0            | 100.0                |

TABLE 489.—Kinds of feed and average amounts of each per horse.

| State and district.      | Grain.          |                 |                | Hroughage.   |              |              |                | Amounts of pasture. |
|--------------------------|-----------------|-----------------|----------------|--------------|--------------|--------------|----------------|---------------------|
|                          | Corn.           | Oats.           | Miscellaneous. | Hay.         | Straw.       | Corn stover. | Miscellaneous. |                     |
|                          | <i>Bushels.</i> | <i>Bushels.</i> | <i>Pounds.</i> | <i>Tons.</i> | <i>Tons.</i> | <i>Tons.</i> | <i>Tons.</i>   | <i>Days.</i>        |
| New York, western.....   | 8.8             | 41.8            | 680            | 3.41         | 1.35         | 0.03         | 0.05           | 49                  |
| Ohio:                    |                 |                 |                |              |              |              |                |                     |
| Scattered.....           | 26.5            | 53.1            | 153            | 2.09         | .78          | .45          | .03            | 68                  |
| Madison County.....      | 29.2            | 5.0             | .....          | 1.63         | .13          | 3.90         | .....          | 172                 |
| Seneca County.....       | 37.4            | 30.2            | .....          | 2.72         | .12          | 1.59         | .....          | 112                 |
| Indiana:                 |                 |                 |                |              |              |              |                |                     |
| Madison County.....      | 37.0            | 13.5            | .....          | 1.66         | 1.04         | .23          | .....          | 169                 |
| Montgomery County.....   | 34.2            | 25.4            | .....          | 1.54         | .98          | .17          | .....          | 163                 |
| Illinois:                |                 |                 |                |              |              |              |                |                     |
| West Central.....        | 57.2            | 30.3            | 28             | .77          | 1.11         | .22          | .02            | 148                 |
| Livingston County.....   | 29.9            | 22.2            | .....          | .47          | 2.46         | .08          | .....          | 196                 |
| Knox County.....         | 22.2            | 24.4            | .....          | 1.15         | 1.25         | .06          | .....          | 196                 |
| Iowa, Iowa County.....   | 43.3            | 60.2            | .....          | 2.94         | .57          | .....        | .....          | 104                 |
| Minnesota:               |                 |                 |                |              |              |              |                |                     |
| Southern.....            | 14.7            | 72.0            | 233            | 2.29         | .....        | .13          | .....          | 86                  |
| Steele County.....       | 22.1            | 45.5            | 71             | 2.08         | .....        | .43          | .02            | 45                  |
| Wisconsin, southern..... | 2.4             | 73.2            | 882            | 1.06         | .73          | .37          | .21            | 63                  |

TABLE 490.—Average chore hours of man and horse labor per horse and per farm.

| State and district.      | Average number of horses per farm. | Hours per horse. |        | Total hours per farm. |        |
|--------------------------|------------------------------------|------------------|--------|-----------------------|--------|
|                          |                                    | Man.             | Horse. | Man.                  | Horse. |
| New York, western.....   | 4.84                               | 127              | 8      | 615                   | 39     |
| Ohio:                    |                                    |                  |        |                       |        |
| Scattered.....           | 4.50                               | 165              | 8      | 742                   | 36     |
| Madison County.....      | 3.25                               | 62               |        | 512                   |        |
| Seneca County.....       | 4.73                               | 90               |        | 430                   |        |
| Indiana:                 |                                    |                  |        |                       |        |
| Madison County.....      | 4.32                               | 66               |        | 218                   |        |
| Montgomery County.....   | 6.04                               | 66               |        | 399                   |        |
| Illinois:                |                                    |                  |        |                       |        |
| West Central.....        | 3.56                               | 65               | 13     | 728                   | 111    |
| Livingston County.....   | 3.45                               | 56               |        | 473                   |        |
| Knox County.....         | 6.98                               | 59               |        | 412                   |        |
| Iowa, Iowa County.....   | 9.63                               | 76               | 4      | 751                   | 38     |
| Minnesota:               |                                    |                  |        |                       |        |
| Southern.....            | 7.00                               | 108              | 19     | 756                   | 133    |
| Steele County.....       | 6.22                               | 36               |        | 535                   |        |
| Wisconsin, southern..... | 5.95                               | 126              | 3      | 714                   | 18     |

TABLE 491.—Cost per head for fattening lambs.

OPEN-LOT FEEDING.<sup>1</sup>

| Region.                     | Year.   | Num-ber of records. | Num-ber of lambs. | Length of feeding period (days). | Average age gain (lbs.). | Average monthly gain (lbs.). | Feed.  | Labor. | Build-ings and equip-ment. | In-terest. | Risk.  | Miscel-laneous. | Market. | Gross cost of gain. | Credits. |          | Total. | Net cost of gain. |
|-----------------------------|---------|---------------------|-------------------|----------------------------------|--------------------------|------------------------------|--------|--------|----------------------------|------------|--------|-----------------|---------|---------------------|----------|----------|--------|-------------------|
|                             |         |                     |                   |                                  |                          |                              |        |        |                            |            |        |                 |         |                     | Wool.    | Ma-nure. |        |                   |
| Northern Colorado           | 1916-17 | 24                  | 2,123             | 147                              | 20                       | 5.4                          | \$3.64 | \$0.39 | \$0.10                     | \$0.23     | \$0.07 | \$0.11          | \$0.56  | \$5.10              | .....    | \$0.14   | \$0.14 | \$4.96            |
| Southern Colorado           | 1916-17 | 16                  | 2,241             | 132                              | 24                       | 5.6                          | 3.55   | .36    | .08                        | .18        | .05    | .13             | .44     | 4.79                | .....    | .06      | .08    | 4.71              |
| Western Nebraska            | 1916-17 | 24                  | 1,312             | 127                              | 19                       | 4.5                          | 2.91   | .22    | .12                        | .20        | .12    | .21             | .39     | 4.37                | .....    | .13      | .30    | 4.17              |
| Central Nebraska            | 1916-17 | 18                  | 2,665             | 120                              | 25                       | 6.2                          | 2.87   | .24    | .10                        | .17        | .14    | .08             | .21     | 3.79                | \$0.07   | .05      | .07    | 3.72              |
| Total or average for region | .....   | 82                  | 8,341             | 132                              | 24                       | 5.6                          | 3.24   | .36    | .10                        | .20        | .10    | .13             | .41     | 4.54                | .02      | .11      | .13    | 4.41              |

## FINISHING IN FEED YARDS.

|                             |         |       |         |     |    |      |        |        |        |        |        |        |        |        |       |       |        |        |
|-----------------------------|---------|-------|---------|-----|----|------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|
| Nebraska                    | 1912-13 | ..... | 21,352  | 114 | 23 | 6.09 | \$1.74 | \$0.14 | \$0.10 | \$0.08 | \$0.08 | \$0.14 | \$0.37 | \$5.66 | ..... | ..... | \$0.20 | \$5.46 |
| Do.                         | 1913-14 | ..... | 28,269  | 87  | 21 | 7.80 | 1.79   | .10    | .06    | .06    | .04    | .15    | .37    | 6.13   | ..... | ..... | .16    | 5.97   |
| Do.                         | 1914-15 | ..... | 23,852  | 108 | 21 | 4.91 | 1.87   | .12    | .08    | .08    | .13    | .17    | .36    | 6.13   | ..... | ..... | .13    | 6.03   |
| Do.                         | 1915-16 | ..... | 41,807  | 102 | 17 | 4.48 | 1.71   | .10    | .05    | .09    | .12    | .15    | .36    | 6.82   | ..... | ..... | .05    | 6.77   |
| Do.                         | 1916-17 | ..... | 44,182  | 96  | 22 | 6.46 | 2.45   | .19    | .05    | .12    | .21    | .33    | .32    | 9.29   | ..... | ..... | .06    | 9.23   |
| Total or average for region | .....   | ..... | 159,502 | 101 | 21 | 5.94 | 1.91   | .13    | .07    | .09    | .12    | .18    | .36    | 7.01   | ..... | ..... | .09    | 6.92   |

## FEEDING IN CORN FIELDS.

|                             |       |    |       |    |      |     |        |        |        |        |        |        |        |        |        |       |        |        |
|-----------------------------|-------|----|-------|----|------|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| Eastern Nebraska            | 1918  | 24 | 1,183 | 92 | 23   | 7.4 | \$3.04 | \$0.09 | \$0.05 | \$0.23 | \$0.34 | \$0.02 | \$0.29 | \$4.06 | .....  | ..... | .....  | \$4.06 |
| Iowa                        | 1918  | 12 | 953   | 91 | 17   | 5.7 | 2.92   | .08    | .03    | .20    | .31    | .06    | .38    | 3.98   | \$0.79 | ..... | \$0.79 | 3.19   |
| Total or average for region | ..... | 36 | 2,136 | 92 | 20.5 | 6.6 | 3.00   | .08    | .05    | .22    | .33    | .03    | .32    | 4.03   | .27    | ..... | .27    | 3.79   |

## BARN FEEDING.

|          |      |    |       |     |    |     |        |        |        |        |        |        |        |        |       |        |        |        |
|----------|------|----|-------|-----|----|-----|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|
| Michigan | 1917 | 13 | 646   | 138 | 21 | 6.7 | \$3.71 | \$0.36 | \$0.50 | \$0.18 | \$0.10 | \$0.05 | \$0.24 | \$5.14 | ..... | \$0.34 | \$0.69 | \$4.45 |
| Do.      | 1918 | 24 | 423   | 130 | 27 | 6.2 | 5.18   | .44    | .49    | .30    | .17    | .07    | .30    | 6.95   | ..... | .35    | .00    | 6.55   |
| New York | 1918 | 9  | 1,069 | 108 | 21 | 5.8 | 4.25   | .25    | .52    | .22    | .33    | .94    | .....  | 5.61   | ..... | .30    | .37    | 5.24   |

<sup>1</sup> Unpublished data in files of U. S. Department of Agriculture.

TABLE 492.—Feed requirements ~~for fattening lambs.~~<sup>1, 2</sup>  
OPEN-LOT FEEDING.

| Region.                       | Year.   | Concentrates (pounds.) |       |         |                   |                       |       |               |          |           |               |                | Total concentrates. |
|-------------------------------|---------|------------------------|-------|---------|-------------------|-----------------------|-------|---------------|----------|-----------|---------------|----------------|---------------------|
|                               |         | Corn.                  | Oats. | Barley. | Linseed oil meal. | Cotton-seed oil meal. | Bran. | Broken beans. | Salvage. | Molasses. | Alfalfa meal. | Dry best pulp. |                     |
| Northern Colorado.....        | 1916-17 | 114                    | 0.05  | 15.0    | 0.5               |                       |       |               |          | 3.0       |               |                | 132.55              |
| Southern Colorado.....        | 1916-17 | 120                    | 2.00  |         | 12.0              |                       |       |               |          | 2.0       | 25            |                | 181.00              |
| Western Nebraska.....         | 1916-17 | 90                     |       | 12.0    | 1.0               |                       |       |               |          | .7        |               | 4              | 107.70              |
| Central Nebraska.....         | 1916-17 | 126                    | 5.00  | .3      | 1.2               |                       |       |               |          |           |               |                | 131.50              |
| FINISHING IN FEED YARDS.      |         |                        |       |         |                   |                       |       |               |          |           |               |                |                     |
| Nebraska.....                 | 1912-13 | 121                    |       |         | 1                 | 3                     | 3     |               |          |           | 12            |                | 143                 |
| Do.....                       | 1913-14 | 95                     | 1     |         | 3                 | 2                     | 1     |               |          |           | 3             |                | 106                 |
| Do.....                       | 1914-15 | 124                    |       |         | 3                 | 2                     |       |               | 1        |           | 7             |                | 137                 |
| Do.....                       | 1915-16 | 112                    |       |         | 4                 | 5                     |       |               |          |           | 5             |                | 127                 |
| Do.....                       | 1916-17 | 110                    | 1     |         | 6                 |                       | 16    |               |          |           |               | 1              | 134                 |
| Total average for region..... |         | 112                    |       |         | 3                 | 2                     | 4     |               |          |           | 5             |                | 127                 |
| FEEDING IN CORN FIELDS.       |         |                        |       |         |                   |                       |       |               |          |           |               |                |                     |
| Eastern Nebraska.....         | 1918    | 132                    | 2     |         | 4.9               |                       |       |               |          |           |               |                | 134.9               |
| Iowa.....                     | 1918    | 133                    | 1     |         |                   |                       |       |               |          |           |               |                | 133.0               |
| Total average for region..... |         | 141                    | 1.5   |         | 4.6               |                       |       |               |          |           |               |                | 143.1               |
| BARN FEEDING.                 |         |                        |       |         |                   |                       |       |               |          |           |               |                |                     |
| Michigan.....                 | 1917    | 125                    | 94    |         | 41.3              |                       | 1.2   |               |          |           |               |                | 152.1               |
| Do.....                       | 1918    | 94                     | 45    | 24      | 44.8              |                       | 3.0   |               | 0.7      |           |               |                | 204.8               |
| New York.....                 | 1918    | 7                      | 13    | 27      | 41.7              |                       | 9.0   | 9.0           | 58.0     |           |               |                | 123.7               |



## OPEN-LOT FEEDING.

| Region.                | Year.   | Dry roughage. |             |        |         |      |          | Succulent roughage. |         |        | Total roughage. | Acres.     |         |       | Days pastured. |
|------------------------|---------|---------------|-------------|--------|---------|------|----------|---------------------|---------|--------|-----------------|------------|---------|-------|----------------|
|                        |         | Alfalfa hay.  | Bean straw. | Straw. | Stalks. | Hay. | Timothy. | Total.              | Beets.  | Slage. | Total.          | Beet tops. | Stover. | Rape. |                |
| Northern Colorado..... | 1916-17 | 260           | 7           | 21     |         |      |          | 288                 | \$71.00 |        | 288.00          | 0.007      |         |       | 3              |
| Southern Colorado..... | 1916-17 | 165           |             | 7      |         |      |          | 172                 |         |        | 71.00           | .007       |         |       | 12             |
| Western Nebraska.....  | 1916-17 | 218           |             | 12     |         |      |          | 230                 | .75     |        | .75             | .002       |         |       | 2              |
| Central Nebraska.....  | 1916-17 | 201           |             | 10     |         |      |          | 211                 |         |        | 211.00          |            |         |       |                |

## FINISHING IN FEED YARDS.

|                               |         |     |  |   |   |  |    |     |  |  |    |       |        |  |  |  |
|-------------------------------|---------|-----|--|---|---|--|----|-----|--|--|----|-------|--------|--|--|--|
| Nebraska.....                 | 1912-13 | 115 |  | 2 | 5 |  |    | 122 |  |  | 23 | 23.00 | 145.00 |  |  |  |
| Do.....                       | 1913-14 | 115 |  |   |   |  |    | 115 |  |  | 23 | 22.00 | 137.00 |  |  |  |
| Do.....                       | 1914-15 | 122 |  |   |   |  |    | 122 |  |  | 23 | 23.00 | 145.00 |  |  |  |
| Do.....                       | 1915-16 | 126 |  |   |   |  |    | 126 |  |  | 17 | 17.00 | 143.00 |  |  |  |
| Do.....                       | 1916-17 | 141 |  |   |   |  | 11 | 152 |  |  | 11 | 11.00 | 163.00 |  |  |  |
| Total average for region..... |         | 124 |  |   | 1 |  | 2  | 127 |  |  | 19 | 19.00 | 146.00 |  |  |  |

## FEEDING IN CORN FIELDS.

|                               |      |  |  |  |  |      |  |      |  |  |  |       |       |      |    |
|-------------------------------|------|--|--|--|--|------|--|------|--|--|--|-------|-------|------|----|
| Eastern Nebraska.....         | 1918 |  |  |  |  | 30   |  | 30   |  |  |  | 30.00 | 0.001 | 0.02 | 9  |
| Iowa.....                     | 1918 |  |  |  |  | 8    |  | 8    |  |  |  | 8.00  | .01   | .02  | 15 |
| Total average for region..... |      |  |  |  |  | 22.5 |  | 22.5 |  |  |  | 22.50 | .005  | .02  | 10 |

## BARN FEEDING.

|               |      |  |    |  |     |  |  |     |  |  |    |       |        |       |  |    |
|---------------|------|--|----|--|-----|--|--|-----|--|--|----|-------|--------|-------|--|----|
| Michigan..... | 1917 |  | 34 |  | 155 |  |  | 190 |  |  | 1  | 1.60  | 191.00 | 0.015 |  | 25 |
| Do.....       | 1918 |  | 49 |  | 96  |  |  | 145 |  |  | 10 | 10.00 | 155.00 | .004  |  | 18 |
| New York..... | 1918 |  | 34 |  | 76  |  |  | 142 |  |  |    |       | 142.00 |       |  | 22 |

<sup>1</sup> For number of lambs and pounds of gain, see Table 491, "Cost per head for fattening lambs."

<sup>2</sup> Unpublished data in files of U. S. Department of Agriculture.

<sup>3</sup> Wet beet pulp.

<sup>4</sup> Oil meal.

TABLE 493.—Yearly feed and man and horse labor requirements for producing 100 pounds of pork.<sup>1</sup>

| Region.                   | Date.     | Droves. | Hours. |               | Pounds of feed. |       |         |        |          |           |             |            | Miscellaneous feeds. |
|---------------------------|-----------|---------|--------|---------------|-----------------|-------|---------|--------|----------|-----------|-------------|------------|----------------------|
|                           |           |         | Labor. | Animal power. | Corn.           | Oats. | Barley. | Wheat. | Tankage. | Oil meal. | Mill feeds. | Skim milk. |                      |
| Iowa and Illinois.        | 1921      | 30      | 1.7    | 0.2           | 403.4           | 21.5  | 1.4     | 0.5    | 8.1      | 0.7       | 1.7         | 27.0       | 29.0                 |
| Nebraska.                 | 1917      | 13      | 3.26   | .64           | 437.9           | 27.4  | .01     |        | 6.2      | 2.0       | 5.0         | 5.4        | 2.6                  |
| Missouri.                 | 1917      | 10      | 3.80   | .66           | 480.2           | 7.8   |         |        | 7.1      | 4.3       | 7.4         | 4.5        | .2                   |
| Central Iowa.             | 1917      | 20      | 2.69   | .67           | 622.0           | 32.7  |         |        | 4.0      | 1.3       | .6          | .3         | 1.7                  |
| Southwest Iowa.           | 1917      | 82      | 3.28   | .71           | 431.7           | 34.8  |         |        | 6.1      | 6.0       | 10.3        | .9         | 16.0                 |
| Average for 1917 records. | 1917      | 82      | 3.13   | .66           | 488.7           | 27.8  | .003    |        | 5.6      | 3.1       | 6.3         | 2.7        | 5.1                  |
| Missouri.                 | 1913      | 84      | 4.56   | 1.10          | 404.6           | 8.4   |         | 8.4    | 5.6      | 3.9       | 46.5        |            | 5.0                  |
| Do.                       | 1914      | 12      | 3.46   | .84           | 387.2           |       |         | 20.6   | 6.9      | .6        | 8.5         |            | 5.3                  |
| Do.                       | 1915      | 15      | 5.68   | 1.86          | 474.8           |       |         | 7.2    | 7.3      | .4        | 38.1        |            | 10.1                 |
| Do.                       | 1916      | 9       | 1.15   | 1.15          | 376.5           |       |         | 50.0   | 5.8      | .9        | 24.5        |            | 11.1                 |
| Do.                       | 1917      | 5       | 2.77   | .69           | 333.2           |       |         |        | 4.8      | 1.2       | 20.4        |            | 10.7                 |
| Average.                  | 1913-1917 | 45      | 4.12   | 1.11          | 399.1           |       |         | 10.9   | 6.2      | .9        | 22.4        |            | 8.2                  |
| Minnesota.                | 1908-1917 | 60      | 0.30   | 1.10          | 150.1           | 100.1 | 280.5   |        | .5       |           | 33.1        | 30.5       | 1.4                  |
| West Central.             | 1913-1917 | 40      | 6.10   | .80           | 346.5           | 69.3  | 46.1    |        |          |           | 30.4        | 68.8       | .2                   |
| South Central.            | 1913-1917 | 100     | 6.20   | .90           | 265.7           | 82.1  | 181.0   |        | .2       |           | 31.6        | 52.2       | .7                   |
| Average.                  | 1913-1917 | 11      | 4.30   | .73           | 404.6           | 27.6  | 47.4    |        |          | 3.0       | 91.4        | 68.8       | 17.6                 |
| Wisconsin.                |           |         |        |               |                 |       |         |        |          |           |             |            |                      |

<sup>1</sup> Includes 0.23 pound rye.

<sup>1</sup> Unpublished data in files of U. S. Dept. of Agriculture.

<sup>2</sup> Includes 0.2 pound soy beans, 0.3 pound pumpkins, 0.7 pound alfalfa hay, 0.2 pound clover hay, and 7.6 pounds bedding.

TABLE 494.—Cost of producing pork per 100 pounds.

| Region.                       | Date.     | Droves | Hogs.  | Pounds produced. | Feed.  | Pasture. | Labor. | Total feed and labor. | Depreciation breeding herd. | Animal power. | Buildings, lot, and equipment. | Death risk. | Miscellaneous. | Interest on herd. | Marketing. | Gross cost. | Deductions. | Net cost. |
|-------------------------------|-----------|--------|--------|------------------|--------|----------|--------|-----------------------|-----------------------------|---------------|--------------------------------|-------------|----------------|-------------------|------------|-------------|-------------|-----------|
| Iowa and Illinois.            | 1921      | 30     | 2,864  | 613,026          | \$3.22 | \$0.55   | \$0.47 | \$4.24                | \$0.25                      | \$0.04        | \$0.41                         | \$0.06      | \$0.37         | \$0.13            | \$0.29     | \$6.79      | \$0.02      | \$5.77    |
| Nebraska, Nebraska, and Iowa. | 1917      | 85     | 91,081 | 91,081           | 12.81  | .37      | .30    | 13.93                 |                             | .10           | .49                            |             | .22            | .27               |            | 15.06       |             | .22       |
| Missouri.                     | 1913-1917 | 45     | 63,751 | 63,751           | 6.14   | .80      | .53    | 7.08                  |                             | .10           | .21                            |             | .16            | .23               |            | 7.66        |             |           |
| Minnesota.                    | 1908-1917 | 100    | 8,207  | 8,207            | 6.76   | .75      | .99    | 7.75                  |                             | .15           | .21                            |             | .75            | .20               |            | 8.31        |             |           |
| Wisconsin.                    | 1912-1917 | 11     | 5,009  | 5,009            | 8.25   | .47      | .54    | 9.26                  |                             | .07           | .20                            |             | .18            | .24               |            | 9.80        |             |           |
| S. Georgia.                   | 1916      | 218    |        |                  | 4.72   |          | .62    | 5.24                  |                             | .07           | .27                            |             |                |                   |            | 5.93        | .35         | 5.58      |

<sup>1</sup> Unpublished data in files of U. S. Department of Agriculture.

<sup>2</sup> U. S. Department of Agriculture Farmers' Bulletin 935 (1918).

|  | Page.         |
|--|---------------|
| Animals—   |               |
| condemnation at slaughter, 1907-1921.....  | 736           |
| farm—  |               |
| aggregate value, by States, comparisons.....   | 733           |
| number and value, Jan. 1, 1920.....  | 470           |
| number in world countries.....   | 675-680       |
| statistics, 1921.....  | 675-736       |
| live—  |               |
| exports, statistics.....   | 743, 749      |
| imports, statistics.....   | 737, 743, 749 |
| meat, prices, index numbers, 1910-1921.....  | 781           |
| predatory, eradication.....  | 45-46         |
| Anthracnose, cotton, nature and control.....   | 356-357       |
| Aphis, corn-root, injuries and control studies.....  | 186-187       |
| Appalachian region, cattle industry, feed requirements, etc.....   | 258-260       |
| Apple trees, acreage in 1910.....  | 464           |
| Apples—  |               |
| cold-storage holdings, by months.....  | 629           |
| commercial crop in 1919.....   | 465           |
| cost of production per acre, by States.....  | 816, 827      |
| exports, statistics.....   | 751, 760      |
| losses, causes and extent, 1912-1920.....  | 629           |
| prices, by States and by months.....   | 625, 627-628  |
| production—  |               |
| 1919.....  | 465           |
| labor and material requirements per acre.....  | 816           |
| shipments, 1917-1921, by States.....   | 629           |
| statistics, production, value, etc.....  | 625-629       |
| Appropriations, Agriculture Department, 1921, details.....   | 68-70         |
| Apricots, exports, statistics.....   | 760           |
| Argentina—   |               |
| corn—  |               |
| production and exports.....  | 205, 206      |
| production, quality, and price.....  | 205-207       |
| Argols, imports, statistics.....   | 753           |
| Arizona—   |               |
| cotton growing.....  | 372           |
| wheat production.....  | 90            |
| Arkansas, interest rates on loans to farmers.....  | 368           |
| Asses—   |               |
| number and value, January 1, 1920.....   | 470           |
| world countries, number.....   | 675-680       |
| Assistant Secretary, supervision over extension work.....  | 37            |
| Automobiles, number—   |               |
| of farms using, and per cent of total farms.....   | 505           |
| on farms, by States.....   | 789           |
| Baby beef, cost—   |               |
| of production, feed, and labor requirements.....   | 266-268       |
| of 100 pounds of gain, by States.....  | 838           |
| Bacon, exports, statistics.....  | 758           |
| BAKER, O. E.—  |               |
| article on "A graphic summary of American agriculture".....  | 407-506       |
| C. R. BALL, C. E. LEIGHTY, and O. C. STINE, article on "Wheat production and marketing".....               | 77-160        |
| C. E. LEIGHTY, C. W. WARRURTON, and O. C. STINE, article on "The corn crop".....                           | 161-226       |
| E. W. SHEETS, C. E. GIBBONS, O. C. STINE, and R. H. WILCOX, article on "Our beef supply".....              | 227-322       |
| Bales—   |               |
| cotton—  |               |
| density after recompressing.....   | 374           |
| size, shape, and weight.....   | 373-374       |
| linters, weights.....  | 382           |
| Baling, cotton.....  | 373           |
| BALL, C. R., C. E. LEIGHTY, G. C. STINE, and O. E. BAKER, article on "Wheat production and marketing"..... | 77-160        |
| Bananas, imports, statistics.....  | 740, 766      |

|  |                     |
|--|---------------------|
| Banks, loans—  | Page.               |
| to cotton growers in leading States  | 369                 |
| to farmers, interest rates, by States  | 778                 |
| Barberry, eradication  | 45                  |
| Barley—  |                     |
| acre, labor and material requirements by States  | 814                 |
| acreage—   |                     |
| graphic showing  | 102                 |
| in 1919  | 442                 |
| consumption in world countries, 1909-1918  | 580                 |
| cost of production per acre, by States   | 814, 822            |
| exports, statistics  | 746                 |
| losses, causes and extent, 1909-1920   | 557                 |
| sowing dates, by States  | 775-776             |
| statistics, acreage production, value, etc.  | 71, 72, 74, 552-558 |
| value of crop, comparison with wheat   | 80                  |
| weight per bushel, estimates 1902-1921   | 778                 |
| world countries—   |                     |
| exports, 1911-1920   | 558                 |
| imports, 1911-1920   | 558                 |
| production and exports   | 781                 |
| yield and value per acre and price   | 556                 |
| Beans—   |                     |
| acre, labor and material requirements, by States   | 812                 |
| cost of production per acre, by States   | 812, 829, 832       |
| exports, statistics  | 748, 757            |
| field, acreage in 1919   | 455                 |
| imports, statistics  | 742                 |
| prices, by States and by months  | 639-640             |
| production and value by States   | 639                 |
| soy, statistics, acreage, production, prices, etc.   | 640-641             |
| statistics—  |                     |
| acreage, production, value, etc.   | 638-640             |
| production, 1910-1921  | 72                  |
| velvet, acreage in 1919  | 444                 |
| world production and acreage, by countries   | 638                 |
| Beef—  |                     |
| canned and pickled, exports, statistics  | 758                 |
| cattle—  |                     |
| milking quality improvement  | 28                  |
| prices   | 692-695, 734        |
| receipts at stockyards, and slaughter, 1921  | 698-699, 715, 735   |
| See also Cattle, beef.   |                     |
| consumption per capita 1907-1921   | 312-316             |
| cost—  |                     |
| of production, factors, variations, etc.   | 265-275             |
| to consumer, distribution of profits   | 300                 |
| cuts, standardized   | 308-312             |
| exports, statistics  | 744, 753            |
| grades, standards  | 308-312             |
| imports, 1910-1920, world countries  | 700                 |
| oils, exports, statistics  | 750                 |
| production—  |                     |
| areas  | 245-264             |
| trend, discussion  | 317-321             |
| supply, article by E. W. Sheets, O. E. Baker, C. E. Gibbons, O. C. Stine, and R. H. Wilcox | 227-322             |
| world countries exports, 1910-1920   | 699                 |
| Bees, number of colonies on farms, Jan. 1, 1920  | 488                 |
| Beeswax—   |                     |
| exports, statistics  | 743                 |
| imports, statistics  | 787, 755            |
| Beets—   |                     |
| statistics—  |                     |
| production, 1910-1921  | 73                  |
| summary, 1919, 1920, 1921  | 771                 |

## Beets—Continued.

|   | Page            |
|---|-----------------|
| sugar—  |                 |
| acreage and production, by States.....                                      | 658, 659, 663   |
| acreage in 1919.....  | 457             |
| cost of production per acre, by States.....                                 | 811, 825        |
| labor and material requirements per acre, by States.....                    | 811             |
| world production, by countries.....   | 665             |
| Beeves, by-products—  |                 |
| price fluctuations.....   | 302             |
| prices at Chicago 1909-1914.....  | 302             |
| Berry, Columbian, description.....  | 26              |
| Billbugs, injuries to corn, control studies.....                            | 186-187         |
| Binder—   |                 |
| twine, cost as factor in wheat profits.....                                 | 117, 120        |
| wheat, use in threshing.....  | 92, 93          |
| Biological Survey—  |                 |
| receipts in 1921.....   | 69              |
| stations in Alaska.....   | 60              |
| Blight, chestnut, destructiveness.....                                      | 42              |
| Blister rust, white-pine, destructiveness.....                              | 42              |
| Blue vitriol, use against bunt in wheat.....                                | 110             |
| Boards of trade, supervision by Secretary.....                              | 34-35           |
| Boll weevil—  |                 |
| cotton—   |                 |
| cost in destruction of cotton.....  | 41              |
| origin, history, habits, and control.....                                   | 349-352         |
| damage to cotton crop, by States.....                                       | 613             |
| injury to cotton production.....  | 384, 406        |
| spread in cotton region, map.....   | 350             |
| Bollworm—   |                 |
| cotton, habits and control.....   | 354             |
| pink—   |                 |
| eradication work.....   | 42-43           |
| history and control work.....   | 352-354         |
| Bolly cotton, description.....  | 381             |
| Bonds, farm-loan, and farm-mortgage extension.....                          | 14, 15          |
| Borer—  |                 |
| corn, European, infested area.....  | 187             |
| European-corn, injuries, and control studies.....                           | 187             |
| larger cornstalk, injuries to corn, control studies.....                    | 187             |
| Boys' clubs, advantages.....  | 37              |
| Brahman cattle, advantages for Cotton Belt.....                             | 254-255         |
| Bran, prices at Minneapolis, by months, 1916-1921.....                      | 603             |
| Brazil, cotton-growing increase.....  | 327             |
| Bread, making of, flours of several kinds.....                              | 123-124         |
| Breeders, wheat, cooperation with market specialists.....                   | 21              |
| British Empire, agricultural production, comparison with United States..... | 407             |
| Broom corn, statistics, acreage, production, prices, etc.....               | 73, 643         |
| Buckwheat—  |                 |
| acreage in 1919.....  | 444             |
| cost of production per acre.....  | 826             |
| exports, statistics.....  | 746             |
| harvesting with reaper, note.....   | 89              |
| statistics, acreage, production, value, etc.....                            | 71, 72, 565-567 |
| yield and value per acre, and price.....                                    | 567             |
| Bud selection, perennial plants.....  | 27              |
| Buenos Aires, freight rates on wheat.....                                   | 136             |
| Buffaloes, number in world countries.....                                   | 675-680         |
| Buildings—  |                 |
| Agriculture Department, condition.....                                      | 61-62           |
| farm, value, January 1, 1920.....   | 494             |
| Bulls, purebred beef breeds on farms.....                                   | 241             |
| Bunt, damage to wheat.....  | 110             |
| Burros, number and value, January 1, 1920.....                              | 470             |
| Bushel weights of grains, 1902-1921.....                                    | 778             |

|   |                        |
|---|------------------------|
| Butter—   | Page.                  |
| exports, statistics                                     | 748, 757               |
| imports, statistics                                     | 737                    |
| prices  | 703                    |
| production—   |                        |
| in factories in 1921                                    | 481                    |
| on farms in 1919  | 480                    |
| statistics, production, prices, and international trade | 703-705                |
| world countries, exports, 1909-1920                     | 704                    |
| world countries, imports, 1909-1920                     | 704                    |
| Cabbage—  |                        |
| cost of production per acre, by States                  | 829                    |
| market acreage in 1919                                  | 460                    |
| prices, by months and by States                         | 648-649                |
| production, acreage, and yield, by States               | 648                    |
| shipments, 1917-1921, by States                         | 649                    |
| statistics—   |                        |
| acreage, production, value, etc                         | 648-649                |
| production, 1910-1921                                   | 72                     |
| Calcium arsenate, use against cotton pests              | 351, 354               |
| Calfskins—  |                        |
| exports, statistics                                     | 744                    |
| imports, statistics                                     | 738, 765               |
| California—   |                        |
| cotton growing  | 372                    |
| fruits, production and prices                           | 634                    |
| nuts, production and prices                             | 634                    |
| oranges, production and value, 1915-1921                | 633                    |
| wheat-production periods                                | 89, 90, 91, 94, 95, 96 |
| Calves—   |                        |
| births, by months                                       | 287                    |
| condemnation at slaughter, 1907-1921                    | 735                    |
| number raised in 1919                                   | 475                    |
| prices at principal markets                             | 692-695                |
| raising for baby beef, feed and labor requirements      | 266-268                |
| receipts at stockyards, and slaughter, 1921             | 698-699, 735           |
| slaughter, 1907-1921                                    | 316                    |
| slaughter under Federal inspection                      | 291                    |
| <i>See also Cattle.</i>                                 |                        |
| Cane—   |                        |
| acreage—  |                        |
| by States   | 660                    |
| 1919  | 457                    |
| in Hawaii   | 661                    |
| cost of production per acre                             | 829                    |
| forage or fodder, acreage in 1919                       | 445                    |
| Louisiana production, 1911-1921                         | 657                    |
| sorghum, for sugar, acreage in 1919                     | 457                    |
| Canker, citrus, control cost, etc                       | 42                     |
| Cantaloupes—  |                        |
| cost of production per acre                             | 829                    |
| market—   |                        |
| acreage, 1919   | 460                    |
| shipments, 1917-1921, by States                         | 654                    |
| Carloads, weight of various commodities                 | 791                    |
| Carrots, cost of production per acre                    | 829                    |
| Cattle—   |                        |
| beef—   |                        |
| breeds, distribution                                    | 242-244                |
| cost of 100 pounds of gain, by States                   | 836-839                |
| importance in agriculture                               | 227-232                |
| marketing methods                                       | 277-280                |
| marketing, seasonal movement                            | 287-292                |
| number and value, January 1, 1920                       | 470                    |
| number, January 1, 1920                                 | 478                    |
| number on farms, map                                    | 229                    |

## Cattle—Continued.

|   | Page.              |
|---|--------------------|
| beef—Continued.   |                    |
| prices at Chicago, monthly averages                     | 292-304            |
| publications relating to                                | 322                |
| pure bred, number on farms, January 1, 1920             | 478                |
| pure bred, value and numbers on farms, etc.             | 239-244            |
| westward movement of industry                           | 232-239            |
| condemnation at slaughter, 1907-1921                    | 735                |
| dairy—  |                    |
| number and value, January 1, 1920                       | 470                |
| number, January 1, 1920                                 | 477                |
| pure bred, number on farms January 1, 1920              | 478                |
| exports, statistics                                     | 743, 750, 757      |
| fattening, feed and labor requirements                  | 269-275            |
| imports, statistics                                     | 737, 764           |
| industry—   |                    |
| growth and extension                                    | 292-299            |
| in important countries                                  | 290                |
| relation to soil fertility                              | 228                |
| numbers—  |                    |
| increase in South, 1880-1920                            | 338                |
| on farms, January 1, 1920                               | 475                |
| pure bred, relation to other cattle, by States          | 241                |
| range, development of industry                          | 235-238            |
| ratio to population, and slaughter                      | 313-320            |
| slaughter—  |                    |
| in 1907-1921  | 316                |
| monthly   | 289                |
| under Federal inspection                                | 290                |
| statistics, number, value, imports, and exports         | 690-700            |
| testing for tuberculosis                                | 45                 |
| tick, eradication work                                  | 44                 |
| tuberculous, indemnity funds                            | 45                 |
| value—  |                    |
| comparison with hogs and sheep                          | 228                |
| on farms, 1910-1921                                     | 163                |
| wintering in Cotton Belt, feed used per 1,000 pounds    | 256                |
| world—  |                    |
| countries, number                                       | 675-680            |
| production  | 231                |
| Cattlemen, loans, needs and practices                   | 275-277            |
| Celery, shipments 1919-1921, by States                  | 652                |
| Cereals—  |                    |
| breeders, cooperation with market specialists           | 21                 |
| consumption in world countries, 1909-1918               | 580                |
| production in tons, per farmer                          | 408                |
| statistics, acreage, production, and exports, 1910-1921 | 71, 72, 74         |
| Cheese—   |                    |
| exports, statistics                                     | 737, 743, 750, 764 |
| production in factories in 1921                         | 482                |
| statistics, production, prices, and international trade | 705-707            |
| Chemistry Bureau, receipts in 1921                      | 69                 |
| Chicago—  |                    |
| freight rates on wheat                                  | 135, 136           |
| market for corn, price determination                    | 217                |
| prices of wheat   | 145, 146           |
| wheat market  | 92                 |
| Chickens—   |                    |
| breed establishment                                     | 28                 |
| prices, 1909-1921                                       | 709                |
| China—  |                    |
| agricultural production, comparison with United States  | 407                |
| cotton production                                       | 327                |
| wheat production, note                                  | 81                 |

|  | Page.              |
|--|--------------------|
| Chinch bugs—   |                    |
| damage to wheat  | 108, 109           |
| injury to corn, control studies  | 186-187            |
| Cholera, hog, control progress   | 46                 |
| Circulars, preparation for teachers                                    | 30                 |
| Citrus—  |                    |
| canker, control cost, etc  | 42                 |
| fruits, acreage in, 1919   | 468                |
| Civil War—   |                    |
| effect—  |                    |
| on cotton growing  | 331-334            |
| on wheat market  | 153                |
| relation to wheat production, note                                     | 93                 |
| Climate—   |                    |
| corn, remarks  | 103                |
| cotton belt, variations  | 341-343            |
| effect on wheat growing  | 81                 |
| influence on corn production and yield                                 | 181-183            |
| relation—  |                    |
| to crop, selections  | 100                |
| to wheat marketing   | 132                |
| to wheat rotation  | 97                 |
| Clover—  |                    |
| acreage in 1919  | 452                |
| and timothy mixed, acreage in 1919                                     | 449                |
| seed—  |                    |
| exports, statistics  | 743                |
| prices, by months, 1910-1921   | 606                |
| production and value, by States and by months                          | 605-606            |
| production, labor, and material requirements per acre, by States       | 816                |
| receipts at Chicago, by months, 1910-1922                              | 606                |
| statistics, production, yield, prices, etc                             | 605-606            |
| Club work, boys' and girls', progress                                  | 37, 38             |
| Cocoa—   |                    |
| exports, statistics  | 744, 747, 749      |
| imports, statistics  | 738, 749, 753      |
| Coconuts, imports, statistics  | 741                |
| Codling moth, control cost   | 41                 |
| Coffee—  |                    |
| exports, statistics  | 744, 749           |
| imports, statistics  | 739, 749, 757, 766 |
| trade, international, 1909-1920, by countries                          | 669                |
| Cold storage, space, by States, 1921                                   | 793                |
| Colorado, wheat production periods                                     | 92, 96             |
| Colts—   |                    |
| horse, on farms, number, January 1, 1920                               | 471                |
| mule, on farms, January 1, 1920  | 471                |
| Columbian berry, description   | 26                 |
| Compressing, cotton, and recompressing                                 | 374, 390           |
| Cooperation—   |                    |
| importance in eradication of pests                                     | 46                 |
| in forestry work and fire control                                      | 54, 56             |
| Copper sulphate, use against hant in wheat                             | 110                |
| Corn—  |                    |
| acre, labor and material requirements by States                        | 808                |
| acreage—   |                    |
| annual, in United States   | 161                |
| cut for forage or fodder, in 1919                                      | 436                |
| for grain, in 1919   | 435                |
| graphic showing  | 108                |
| in South, comparison with cotton                                       | 337                |
| yield, and production, 1866-1921                                       | 169                |
| advantages, and climate  | 108                |
| amount required to purchase various farm tools, etc., 1913, 1920, 1921 | 216                |



| Corn—Continued.   | Page.            |
|---|------------------|
| Argentine, production and exports, 1901-1921                            | 205              |
| Belt—   |                  |
| cattle industry, management, fattening methods, etc.                    | 260-265          |
| crop combinations   | 176-178          |
| location, area, and description   | 175-176          |
| borer, European, area infested  | 187              |
| consumption in world countries, 1909-1918                               | 580              |
| cost of production per acre, 1902-1921, by States                       | 808, 817-818     |
| cribbing, methods   | 202              |
| crop—   |                  |
| article by C. E. Leighty, C. W. Warburton, O. C. Stine, and O. E. Baker | 161-226          |
| marketing channels  | 224              |
| cutting—  |                  |
| for silage, etc.  | 178-181          |
| with harvester  | 180, 181         |
| danger and effect of early frosts                                       | 182              |
| destruction by smut, 1917-1920  | 185              |
| diseases, injuries and effect on corn yield                             | 185, 186         |
| early history and crop development                                      | 171-175, 219-220 |
| exports—  |                  |
| 1891-1920   | 208-205          |
| and per cent of crop, 1891-1920   | 204              |
| comparison with wheat   | 80               |
| statistics  | 746, 751         |
| farmers growing, and per cent of all farmers                            | 162              |
| farms producing in 1919   | 163              |
| feeding to live stock   | 18               |
| freight rates—  |                  |
| in 1910-1921  | 207              |
| rail and ocean  | 207-208          |
| grades, condition governing, effect on prices, etc.                     | 195-199          |
| grading, quality, etc., as factors                                      | 195-199          |
| growing—  |                  |
| Central Northwest   | 105              |
| season and frost  | 106              |
| season and requirements   | 188              |
| season, length, various sections  | 182              |
| handling the crop, method   | 178-181          |
| hauling, cost per ton per mile  | 791              |
| husking from standing stalks, value                                     | 178, 192         |
| imports—  |                  |
| in 1914   | 205              |
| statistics  | 740, 753, 766    |
| leading crop in United States, in acreage and value                     | 161              |
| losses, causes, and extent, 1909-20                                     | 514              |
| market prices, determination at Chicago                                 | 217              |
| marketing—  |                  |
| movement from producing farms   | 199-202          |
| receipts at principal markets, 1917-1921                                | 195-197          |
| marketings—   |                  |
| monthly   | 201              |
| per cent of total crop in 1919  | 437              |
| merchantable, per cent of total crop, 1886-1921, 1911-1920              | 198              |
| moisture—   |                  |
| content and shrinkage in storage, tests                                 | 202-203          |
| content, principal markets, by months                                   | 203              |
| monthly movement from county where grown, per cent of crop, 1911-1920   | 200, 201         |
| new, shrinkage, by months, 9-year average                               | 208              |
| planting—   |                  |
| date, various sections  | 183              |
| dates, by States  | 775              |
| season, various sections  | 184              |

## Corn—Continued.

|   |                         |
|---|-------------------------|
| price—  | Page                    |
| annual, in Chicago, New York, Liverpool, 1840-1921          | 218                     |
| conditions, and outlook                                     | 219-226                 |
| discount, by grades, 1920, 1921, by months                  | 197                     |
| trend, 1840-1921  | 217-219                 |
| prices—   |                         |
| at principal markets  | 514-515                 |
| during war period, with comparisons                         | 215-217                 |
| in terms of beef  | 296                     |
| on farm, 1866-1920, discussion, etc.                        | 220-223                 |
| on farms, and farm value per acre, 1866-1921                | 220                     |
| on farms, and marketings, 1909-1914, by months              | 213                     |
| on farms, and purchasing power, by months, 1912-1921        | 214                     |
| on farms, December 1, 1921, with comparisons                | 209-212                 |
| regulation by grades, fluctuation, etc.                     | 195-199                 |
| through winter-fed cattle                                   | 273-275                 |
| variations, seasonal and annual                             | 212-215                 |
| production—   |                         |
| and distribution  | 165                     |
| and exports, United States and Argentina, average 1900-1920 | 206                     |
| Argentina, increase in                                      | 205-207                 |
| conditions governing  | 170                     |
| cost suggestions  | 188-194                 |
| cost survey   | 189, 191                |
| cost variations, factors                                    | 190-194                 |
| cost working standards, studies, etc.                       | 188-190                 |
| costs, estimating methods, and samples                      | 193-194                 |
| factors influencing   | 181-187                 |
| financing methods   | 208                     |
| in 1839, 1859, 1879, 1890, 1919                             | 171-173                 |
| in 1919, ratio to production, 1911-1920                     | 437                     |
| in every State  | 161                     |
| in United States, 1911-1920                                 | 198                     |
| in United States, 1912, 1920, 1921, acreage, yield, etc.    | 168-171                 |
| per capita and yield per acre                               | 432                     |
| per capita, 1870-1922                                       | 222                     |
| price and purchasing power December 1, 1866-1921            | 222                     |
| relation to meat supply                                     | 225-226                 |
| purchasing power—   |                         |
| determination method  | 215                     |
| in 1866-1921  | 220-222                 |
| maintenance methods   | 224-225                 |
| receipts, by grades, principal markets, 1917-1921           | 196                     |
| rots, investigations  | 27                      |
| statistics—   |                         |
| acreage, production, value, etc., 1921                      | 71, 72, 74, 80, 507-519 |
| summary, 1919, 1920, 1921                                   | 770                     |
| surplus production, areas                                   | 199                     |
| sweet—  |                         |
| cost of production per acre                                 | 829                     |
| market acreage in 1919                                      | 462                     |
| use—  |                         |
| and value for food and a feed for stock                     | 164-165                 |
| for food and per cent of crop                               | 165                     |
| uses—   |                         |
| and value   | 164                     |
| on farms and per cent of crop                               | 165                     |
| value—  |                         |
| comparison with other crops                                 | 164                     |
| of crop, comparison with wheat                              | 80                      |
| of crop in United States, 1910-1914, and 1915-1919          | 164                     |
| on farms, 1910-1921   | 163                     |
| world—  |                         |
| exports by countries, 1909-1920                             | 519                     |
| imports by countries, 1909-1920                             | 519                     |

|  |                    |
|--|--------------------|
| Corn—Continued.  |                    |
| world—Continued.   |                    |
| production—  | Page.              |
| and exports  | 781                |
| by countries   | 166-168            |
| equal to any other cereal                                | 161                |
| in 1895-1921, 1919-1921                                  | 167, 168           |
| increase, 1895-1897 to 1918-1921                         | 168                |
| yield—   |                    |
| and value per acre, and price, 1917-1921                 | 512                |
| increase, aid of Agriculture Department and colleges     | 175                |
| Cotton—  |                    |
| acre, labor, and material requirements, by States        | 809                |
| acreage—   |                    |
| and production in 1919                                   | 434                |
| decrease, 1921, price                                    | 13                 |
| yield and production, 1866-1921, trend                   | 335-336            |
| American-Egyptian, location of crop and quality of fiber | 372                |
| angular leaf-spot, nature and control                    | 357                |
| anthracnose, nature, and control                         | 356-357            |
| bales, size, shape, and weight                           | 373-374            |
| baling   | 373                |
| Belt—  |                    |
| beef-cattle industry                                     | 254-258            |
| definition, and general conditions                       | 338-348            |
| soils, climate, and farm practices                       | 340-348            |
| boll weevil, history, habits, and control                | 349-352            |
| bollworm, habits and control                             | 354                |
| bolly, description                                       | 381                |
| classification by Agriculture Department                 | 385                |
| compress, description                                    | 373                |
| consuming markets  | 385                |
| consumption—   |                    |
| in 1896-1921   | 391                |
| of crop  | 391-400            |
| cost of production per acre, by States                   | 809, 819           |
| crop—  |                    |
| American, deterioration in quality                       | 400-404            |
| importance in the South                                  | 323-324            |
| 1920, slump in price                                     | 13                 |
| cultural practices against boll weevil                   | 352                |
| diseases, description and control                        | 355-357            |
| Egyptian, description                                    | 329                |
| export markets   | 384, 385           |
| exports  | 393, 394, 396-399  |
| exports—   |                    |
| reduction in 1920 effect on prices, 1921                 | 396, 404           |
| statistics   | 745, 749, 751      |
| to specified countries, 1896-1921                        | 399                |
| farms, organization for profitable production            | 365-367            |
| fertilizers  | 343                |
| future, markets or exchanges                             | 385                |
| ginning, baling, and compressing                         | 372-375            |
| grading  | 378-381            |
| growers, financing                                       | 367-369            |
| growing—   |                    |
| foreign competition                                      | 401-402            |
| one-variety communities, benefits                        | 402-404            |
| under irrigation farm practices                          | 347                |
| handling and marketing                                   | 370-390            |
| hauling, cost per ton per mile                           | 791                |
| imports  | 393                |
| imports, statistics                                      | 739, 749, 759, 766 |
| improvement by use of better varieties                   | 402                |
| industry—  |                    |
| problems, improved methods and outlook                   | 400-406            |
| leaf worm, habits and control                            | 354                |
| long-staple, fiber length and quality                    | 371                |

## Cotton—Continued.

|  | Page                |
|--|---------------------|
| losses, causes and extent, 1900-1920   | 613                 |
| marketing  | 370-390             |
| marketing and prices   | 385-390             |
| markets, classification and location   | 383-385             |
| pests, description and control   | 349-354             |
| picking dates in Texas   | 342                 |
| Pima, fiber length   | 372                 |
| planting, by States  | 775-776             |
| dates, in Texas  | 342                 |
| press, description   | 373, 375            |
| prices—  |                     |
| 1866-1921  | 610, 612-615        |
| and quotations, variations   | 335-387, 388-390    |
| comparison with wages and farm supplies, 1910-1921                                 | 364-365             |
| production—  |                     |
| and consumption, 1913-14 and 1920-21, comparison                                   | 405                 |
| and reports  | 781                 |
| by countries   | 609-610             |
| by years and by States   | 610-612             |
| comparison of long-staple with short-staple  | 371                 |
| cost, studies, results   | 357-365             |
| costs, figuring, example   | 362-363             |
| costs, variations  | 358-362             |
| per capita and yield per acre  | 432                 |
| shifts in region since 1839  | 330-335             |
| recompressing  | 374, 390            |
| root knot, cause and prevention  | 356                 |
| rust, cause and control  | 356                 |
| sea-island—  |                     |
| description  | 327, 329            |
| quality, and decrease in quantity  | 372, 374            |
| selling in the seed  | 375-376             |
| short-staple, fiber length and quality   | 370-371             |
| situation, article by A. M. Agelasto, C. B. Doyle, G. S. Meloy, and<br>O. C. Stine | 323-406             |
| snaps, description   | 381                 |
| spot markets, location and functions   | 383-395             |
| standards, official, distribution  | 379-381             |
| statistics—  |                     |
| acreage, production, value, etc.   | 71, 73, 75, 609-616 |
| summary, 1919, 1920, 1921  | 770                 |
| supply—  |                     |
| and distribution, 1905-1921  | 393-394             |
| 1921, and prices   | 404                 |
| Texas root rot, results  | 356                 |
| trade, international—  |                     |
| 1866-1921, by years and by countries   | 610, 616            |
| charts   | 397, 398            |
| transportation, practices  | 390                 |
| types, commercial, description   | 327-330             |
| upland—  |                     |
| long-staple, description   | 329                 |
| short-staple, description  | 329-330             |
| value—   |                     |
| comparison with other crops  | 324                 |
| of crop, comparison with wheat   | 80                  |
| on farms, 1910-1921  | 163                 |
| varieties—   |                     |
| improvement  | 402                 |
| protection by community action   | 402-404             |
| warehouses, location and use   | 376-378             |
| warehousing  | 376-378             |
| wilt, cause and prevention   | 355-356             |
| world—   |                     |
| production   | 324-327             |

|  | Page.        |
|--|--------------|
| Cotton—Continued.                                      |              |
| world—Continued.                                       |              |
| production and exports                                 | 781          |
| production by countries, 1909-1920                     | 609-610      |
| yield and value, by States                             | 612          |
| Cottonseed—  |              |
| crushing process and products obtained                 | 376, 399     |
| delinting  | 376, 381     |
| disposal at public ginneries                           | 375          |
| exports, statistics                                    | 748          |
| handling and uses                                      | 376, 399-400 |
| meal, prices at Memphis, by months                     | 604          |
| oil—   |              |
| exports, 1913-1920, world countries                    | 800          |
| imports, 1913-1920, world countries                    | 800          |
| prices, by months, 1910-1922                           | 618          |
| production, imports and exports, 1912-1921             | 799          |
| trade, international, by countries                     | 618          |
| prices, by months, 1910-1921                           | 617          |
| production and value by States                         | 617          |
| products, value and increased demands                  | 376, 399-400 |
| Cotton-free zones, enforcement in fight against weevil | 352, 353     |
| Cottons, Asiatic, description                          | 330          |
| Cowpeas—   |              |
| statistics—  |              |
| acreage, production, prices, etc.                      | 641          |
| summary, 1919, 1920, 1921                              | 771          |
| Cows—  |              |
| cost of feed and labor in producing baby beef          | 268          |
| dairy—   |              |
| feed and labor requirements, by States                 | 825          |
| yearly cost, production and by-products, by States     | 833-835      |
| milk, number and value, and prices                     | 690-692      |
| Cradle, wheat, harvest use                             | 87, 89       |
| Cranberries—   |              |
| acreage in 1919  | 689          |
| production, acreage, value, by States                  | 634          |
| Credit—  |              |
| cotton growers', forms and rates                       | 367-369      |
| farmers'—  |              |
| beef production, importance                            | 275-277      |
| difficulties   | 11, 15       |
| kinds of loan  | 121          |
| form, for wheat marketing                              | 133          |
| Crop—  |              |
| Estimates Bureau, consolidation                        | 16           |
| reports, service work                                  | 40           |
| Cropping systems, representative cotton farms          | 365-367      |
| Crops—   |              |
| acreage and value, relative importance, 1919           | 432          |
| advantages and selection                               | 104, 105     |
| combinations—  |              |
| in Corn Belt   | 176          |
| in Cotton Belt   | 343-346      |
| composite—   |              |
| conditions, monthly, 1910-1921                         | 777          |
| yields, 1917-1921, by States                           | 777          |
| cost of production, 1920                               | 4            |
| diversification in the South                           | 336-338, 366 |
| diversified, acreage, comparison with cotton           | 337          |
| farm, production and marketing, cost studies           | 28           |
| prices—  |              |
| conditions determining                                 | 2-3          |
| index numbers, 1908-1921                               | 781          |
| reduction, 1920  | 4, 8, 12-13  |
| production, labor and material requirements per acre   | 808-832      |
| purchasing power, reduction                            | 6-7          |

## Crops—Continued.

|  |                             |
|--|-----------------------------|
| sales—   | Page                        |
| by farmers, monthly percentage   | 779                         |
| by farmers, per cent of all receipts, by States                        | 780                         |
| rotations for Corn Belt, conditions governing                          | 176-178                     |
| statistics, summary, 1919, 1920, 1921                                  | 770-772                     |
| value—   |                             |
| by States, comparisons   | 773                         |
| of all in United States, 1919  | 433                         |
| per acre, 1886-1921  | 772                         |
| Cucumbers, cost of production per acre                                 | 829                         |
| Cull products, farm, utilization studies                               | 28                          |
| Currants, imports, statistics  | 740, 755                    |
| Dairy products—  |                             |
| exports, statistics  | 74, 743, 749, 750, 757, 758 |
| imports, statistics  | 737, 749, 753, 757, 764     |
| prices   | 18                          |
| receipts from farm sales during 1919                                   | 479                         |
| reports, periodical  | 40                          |
| <i>See also</i> Butter; Cheese; Milk.                                  |                             |
| Dakota. <i>See</i> North Dakota.                                       |                             |
| Dakotas, wheat-production periods                                      | 94, 96                      |
| Dates, imports, statistics   | 740, 755                    |
| Day, length, relation to plant growth, studies                         | 27                          |
| Defining, cotton seed, and uses of linters                             | 376, 381-382                |
| Demonstration, home work, increase                                     | 36-37, 38                   |
| Department. <i>See</i> Agriculture Department.                         |                             |
| Diseases—  |                             |
| corn, injuries, effect on yield  | 185-186                     |
| grain, relation to market values                                       | 22                          |
| plant and animal, control work   | 41                          |
| Diversification, crop, in the South                                    | 338-338, 366                |
| DOYLE, C. B., A. M. AGELASTO, G. S. MELOY, and O. C. STINE, article on |                             |
| "The cotton situation"   | 323-406                     |
| Drainage, investigations of  | 28                          |
| Drought, effect on wheat quality                                       | 127                         |
| Drugs, composition research  | 28                          |
| Dry—   |                             |
| farming, wheat rotation, factors in choice                             | 97                          |
| land, wheat production   | 93, 94, 96                  |
| Durum wheat, production, yield, and district                           | 123, 124                    |
| Economics—   |                             |
| Agricultural Bureau, organization                                      | 16-18                       |
| agricultural, study  | 15-18                       |
| home study   | 31                          |
| Education—   |                             |
| agricultural, extension and improvement                                | 29-31                       |
| graduate training in Department  | 65-66                       |
| Eggs—  |                             |
| exports, statistics  | 743                         |
| imports, statistics  | 737                         |
| prices and holdings  | 708                         |
| Egypt, cotton production   | 325                         |
| Egyptian cotton, description   | 329                         |
| Electric lights, use on farms, statistics                              | 788                         |
| Elevator, wheat, use in marketing                                      |                             |
| Elevators, grain, remarks and illustrations                            | 181                         |
| Equipment, farm, manufacture, 1920                                     | 795-798                     |
| Expenditures, Agriculture Department, 1921                             | 69                          |
| Experiment stations—   |                             |
| funds, State and Federal   | 29                          |
| research work, expenditures in 1921                                    | 70                          |
| Explosives, manufacture from linters                                   | 382                         |
| Exports—   |                             |
| agricultural products, statistics                                      | 744-748, 750-752, 769       |
| barley for world countries, 1911-1920                                  | 558                         |

| Exports—Continued.                                  | Page.             |
|---|-------------------|
| cattle, statistics                                  | 743, 750, 757     |
| coffee, 1909-1920, by countries                     | 669               |
| corn—   |                   |
| and per cent of crop, 1891-1920                     | 204, 206          |
| for 1891-1920                                       | 203, 205          |
| for world countries, 1909-1920                      | 519               |
| cotton  | 393, 394, 396-399 |
| cotton, 1866-1921                                   | 610, 616          |
| cottonseed oil—                                     |                   |
| by countries, 1909-1920                             | 618               |
| 1913-1920, world countries                          | 800               |
| farm products, 1910-1921                            | 74-75             |
| flaxseed, of world countries, 1911-1920             | 574-575           |
| hides and skins, 1909-1920, world countries         | 681               |
| hops, 1910-1921                                     | 686               |
| horses and mules, 1918-1920                         | 743               |
| linseed oil, 1913-1920, world countries             | 803               |
| markets for cotton                                  | 384, 385          |
| meat and meat products, 1911-1920, world countries  | 682               |
| mutton, 1910-1920, world countries                  | 718               |
| oats of world countries, 1911-1920                  | 551               |
| olive oil, 1913-1920, world countries               | 801               |
| peanut oil, 1913-1920, world countries              | 802               |
| peanuts, by countries                               | 646-647           |
| pork, 1910-1920, world countries                    | 729               |
| potatoes—   |                   |
| for 1866-1921                                       | 583               |
| world countries                                     | 590               |
| rice, of world countries, 1909-1920                 | 579               |
| rye, of world countries, 1911-1920                  | 565               |
| sheep, 1913-1920                                    | 743               |
| swine, 1913-1920                                    | 743               |
| tea, by countries                                   | 668               |
| vegetable oils, 1912-1921                           | 799               |
| wheat, for world countries, 1909-1920               | 538               |
| wool, 1909-1920, world countries                    | 722               |
| Extension work—                                     |                   |
| agencies employed                                   | 37-38             |
| aid to negro farmers                                | 36                |
| consolidation of offices                            | 35-36             |
| for improvement of farm homes                       | 31                |
| in States, expenditures, 1921                       | 70                |
| offices consolidation                               | 35-36             |
| supplemental funds by States and counties           | 36                |
| unified programs                                    | 38                |
| Farm—   |                   |
| American, investment, organization, etc.            | 410               |
| animals—  |                   |
| number and value, January 1, 1920                   | 470               |
| See also Animals; Live stock.                       |                   |
| buildings, value, January 1, 1920                   | 494               |
| crops—  |                   |
| acreage and production, 1910-1921, statistics       | 71-73             |
| purchasing power of 1 acre, per cent of 1914        | 782-783           |
| statistics summary, 1919, 1920, 1921                | 770-772           |
| enterprises, selection by cotton farmers, examples  | 365-367           |
| implements—   |                   |
| and equipment manufacture, 1920                     | 795-798           |
| and machinery, value, January 1, 1920, and per farm | 494               |
| labor—  |                   |
| supply and demand, 1919-1922                        | 786               |
| wages, 1910-1921                                    | 784-785           |
| lands—  |                   |
| area in United States                               | 23                |
| increase in value                                   | 3, 4, 10, 24      |
| value per acre, January 1, 1920                     | 492               |

|  |                |
|--|----------------|
| <b>Farm—Continued.</b>   | <b>Page.</b>   |
| Management Office, consolidation                                   | 16             |
| organization, importance   | 225            |
| prices—  |                |
| relation to high freight rates                                     | 7-10           |
| slump in leading crops   | 12             |
| products—  |                |
| carload weights  | 791            |
| cost data  | 804-845        |
| production and exports, statistics                                 | 71-76          |
| railway freight tonnage, 1916-1921                                 | 790            |
| sales by farmers, monthly percentages                              | 779            |
| value, 1879-1921   | 772            |
| profits increase, study of production cost                         | 111            |
| property, value, January 1, 1920                                   | 493            |
| wages reduction, disproportionate                                  | 5, 12          |
| women, aid by home demonstration work                              | 36-37          |
| <b>Farmer—</b>   |                |
| American, efficiency   | 5, 24          |
| income uncertainty   | 1-6            |
| study of production cost, point of view                            | 112            |
| <b>Farmers—</b>  |                |
| condition, discussion by Secretary                                 | 1-13, 66       |
| cotton—  |                |
| loans and interest rates   | 367-369        |
| marketing policy   | 387-388        |
| selection of enterprises, examples                                 | 365-367        |
| credit, difficulties   | 11, 15         |
| difficulties, matter of national concern                           | 11             |
| legislation for  | 13-15          |
| loans, interest rates, by States                                   | 773            |
| losses by increased prices of land                                 | 10-11          |
| negro, aid by extension workers                                    | 36             |
| number growing corn, and per cent of all farmers                   | 162            |
| number in United States  | 407-408        |
| number reporting use of gas, electric lights, and telephones       | 783            |
| numbers growing wheat, by States                                   | 78             |
| profits increase, suggestion for                                   | 119            |
| sales—   |                |
| per cent of receipts by classes                                    | 780            |
| receipts, monthly percentage                                       | 779            |
| seed-grain loans in 1921   | 70             |
| supplies—  |                |
| cost, comparison with farm wages, 1910-1921                        | 193            |
| prices, table, 1909-1921   | 782-783        |
| <b>Farming, tractor, cost data</b>                                 | <b>805-807</b> |
| <b>Farms—</b>  |                |
| average acreage, January 1, 1920                                   | 491            |
| beef cattle, number reporting pure bred, by States                 | 241            |
| cotton—  |                |
| organization for profitable production                             | 365-367        |
| supplies and wages, cost, comparison with cotton prices, 1910-1921 | 364-365        |
| crop production and marketing cost, studies                        | 23             |
| extent of tenancy, etc.  | 493            |
| home improvement, by extension workers                             | 31             |
| number and acreage   | 487, 490       |
| operation—   |                |
| by colored owners or tenants January 1, 1920                       | 501            |
| by owners or tenants, value, etc.                                  | 498            |
| by white owners or tenants, number January 1, 1920                 | 500            |
| practices in Cotton Belt variations                                | 846-848        |
| value, and per cent on land, buildings, and live stock             | 497            |
| <b>Fattening—</b>  |                |
| beef cattle—   |                |
| cost, feed, and labor requirements                                 | 269-275        |
| cost of 100 pounds of gain, by States                              | 836-839        |
| lambs, cost per head, by States                                    | 842-844        |



|  | Page.                        |
|--|------------------------------|
| Feed—  |                              |
| baby beef, requirements.....                           | 266-268                      |
| expenditure per farm, in 1919.....                     | 495                          |
| prices, by months, 1910-1921.....                      | 603-604                      |
| requirements for cattle in Cotton Belt.....            | 256-258                      |
| Fertilizer—  |                              |
| cost—  |                              |
| as factor in wheat profits.....                        | 117                          |
| in cotton production.....                              | 361, 362, 363                |
| expenditure per farm, in 1919.....                     | 496                          |
| Fertilizers, cotton.....                               | 348                          |
| Fibers—  |                              |
| animal—  |                              |
| exports, statistics.....                               | 743                          |
| imports, statistics.....                               | 737, 764                     |
| vegetable, imports, statistics.....                    | 739, 749, 753, 754, 759, 766 |
| Figs, imports, statistics.....                         | 740, 755                     |
| Filberts, imports, statistics.....                     | 741                          |
| Finance, wheat storage and movement.....               | 133-134                      |
| Fire, protection work in forests.....                  | 54, 56, 56                   |
| Flail, wheat harvest use.....                          | 87, 88                       |
| Flax—  |                              |
| acreage in 1919.....                                   | 446                          |
| cost of production per acre.....                       | 830                          |
| harvesting with reaper, note.....                      | 89                           |
| imports, statistics.....                               | 730, 753, 754, 766           |
| statistics, acreage production, value, etc.....        | 568-575                      |
| Flaxseed—  |                              |
| exports of world countries, 1911-1920.....             | 574-575                      |
| imports—   |                              |
| of world countries, 1911-1920.....                     | 574-575                      |
| statistics.....  | 748, 753, 754, 761, 767      |
| losses, causes and extent, 1909-1920.....              | 572                          |
| statistics, acreage production, value, etc.....        | 73, 570-575                  |
| Florida, oranges, production and value, 1915-1921..... | 633                          |
| Flour—   |                              |
| exports, statistics.....                               | 747, 752, 761                |
| imports, statistics.....                               | 740, 753, 754                |
| kinds and blends, discussion.....                      | 123                          |
| prices per barrel for, 1913-1921.....                  | 533                          |
| Fodder—  |                              |
| cane, acreage in 1919.....                             | 446                          |
| corn, acreage cut in 1919.....                         | 436                          |
| sorghum, acreage in 1919.....                          | 445                          |
| Food—  |                              |
| and drugs act, administration.....                     | 32                           |
| composition, research.....                             | 28                           |
| corn, use and value.....                               | 164                          |
| inspection, service work.....                          | 40                           |
| production, relation to farming.....                   | 18                           |
| supplies inspection for other departments.....         | 40                           |
| supply, importance to Nation.....                      | 1-3                          |
| surplus, need by starving nations.....                 | 6                            |
| Foot-and-mouth disease, control.....                   | 42                           |
| Forage—  |                              |
| acreage in 1919.....                                   | 447                          |
| cane, acreage in 1919.....                             | 446                          |
| character on western ranges.....                       | 251                          |
| corn—  |                              |
| acreage cut.....                                       | 179                          |
| acreage cut in 1919.....                               | 436                          |
| kinds and production in 1919, by States.....           | 262                          |
| sorghum, acreage in 1919.....                          | 445                          |
| Forecasts, weather, service work.....                  | 39                           |
| Foreign—   |                              |
| competition, relation to high freight rates.....       | 9-10                         |
| nations, need of surplus crops.....                    | 6                            |

|  |                                 |
|--|---------------------------------|
| Forest—  |                                 |
| products—  | Page.                           |
| exports, statistics  | 745-746, 749, 756, 762-763, 769 |
| imports, statistics  | 739-740, 749, 756, 768          |
| laboratory at Madison, Wis.  | 53                              |
| utilization  | 57                              |
| Service—   |                                 |
| cooperation with other bureaus   | 53-59                           |
| receipts, 1921   | 69                              |
| Forestry, agricultural problem   | 53-59                           |
| Forests—   |                                 |
| acreage in 1920  | 426-427                         |
| conservation and protection  | 54-57                           |
| destruction by wasteful methods  | 52                              |
| experiment stations, scope of work   | 53, 55                          |
| National—  |                                 |
| area, by States  | 792                             |
| designation and administration   | 51-57                           |
| policy of administration   | 52-54                           |
| revenue from various sources   | 792                             |
| roads, appropriation   | 50                              |
| timber uses, statistics  | 792                             |
| utilization for grazing  | 57                              |
| new, purchases to protect watersheds   | 53, 55                          |
| private, owners' cooperation with Government   | 54                              |
| protection from fire   | 54, 55, 56                      |
| Formaldehyde, use against bunt in wheat  | 110                             |
| Freight—   |                                 |
| rates—   |                                 |
| aid to foreign competition   | 9-10                            |
| relation to farmers' incomes   | 7-10                            |
| ocean, for corn, 1910-1921   | 207                             |
| tonnage on railways, farm products and other, 1916-1921  | 790                             |
| Frost, risk in Iowa and North Dakota   | 106                             |
| Frosts, early, danger to corn crop   | 182                             |
| Fruits—  |                                 |
| acreage and value in 1919  | 463                             |
| bush, acreage in 1919  | 469                             |
| citrus, acreage in 1919  | 463                             |
| fresh or dried—  |                                 |
| exports, statistics  | 746, 760                        |
| imports, statistics  | 740, 757, 766                   |
| improvement by bud selection   | 27                              |
| market receipts, 1916-1921   | 652-656                         |
| statistics—  |                                 |
| acreage, production value, etc.  | 72, 625-634                     |
| summary, 1919, 1920, 1921  | 771                             |
| Fuel, tractor, requirements and cost per acre  | 806                             |
| Fungi, damage to wheat   | 110                             |
| Future—  |                                 |
| markets, cotton, domestic and foreign  | 335                             |
| trading act, administration  | 34-35                           |
| Gas, use on farms, statistics  | 788                             |
| Georgia—   |                                 |
| cotton—  |                                 |
| farms, organization for profit, examples   | 365-367                         |
| production costs   | 363                             |
| interest rates on loans to farmers   | 368                             |
| GIBBONS, C. E., O. E. BAKER, E. W. SHEETS, O. C. STINE, and R. H. WILCOX, article on "Our beef supply" | 227-322                         |
| Gin, cotton, roller and saw, description and use   | 372-373                         |
| Ginneries, public, custom work   | 375                             |
| Ginning, cotton, machines, description and use   | 372-375                         |
| Gipsy moth, control work   | 48                              |
| Girls' clubs, advantages   | 37                              |
| Glucose, exports   | 751, 760                        |

|  | Page.                            |
|--|----------------------------------|
| Glue—  |                                  |
| exports, statistics.....                                       | 743                              |
| imports, statistics.....                                       | 737                              |
| Goats—   |                                  |
| condemnation at slaughter, 1907-1921.....                      | 736                              |
| number—  |                                  |
| in world countries.....  | 675-680                          |
| on farms and ranges, Jan. 1, 1920.....                         | 486                              |
| Goatskins, imports, statistics.....                            | 738, 755, 765                    |
| Grades—  |                                  |
| corn, relation to marketing and prices.....                    | 195-199                          |
| cotton, official standards.....                                | 379-381                          |
| standard, for cattle and beef.....                             | 308-312                          |
| Grading, cotton.....   | 378-381                          |
| Graduate work, department.....                                 | 65-66                            |
| Grain—   |                                  |
| diseases in relation to market values.....                     | 22                               |
| exports, statistics.....                                       | 746, 747, 751, 752, 753, 760-761 |
| imports, statistics.....                                       | 740, 753, 754                    |
| exchange, supervision.....                                     | 14, 34-35                        |
| harvest time relations.....                                    | 100                              |
| marketing studies.....   | 21-22                            |
| products—  |                                  |
| exports, statistics.....                                       | 746, 747                         |
| imports, statistics.....                                       | 746-747                          |
| selection for rotation with wheat.....                         | 97                               |
| statistics of crops of 1921.....                               | 507-580                          |
| storage, capacity of mills and elevators, by States, 1918..... | 794                              |
| Grains—  |                                  |
| small—   |                                  |
| acreage in comparison with wheat.....                          | 99                               |
| cut for hay, acreage in 1919.....                              | 453                              |
| use as feed, profits.....                                      | 13                               |
| weights per bushel, estimates, 1902-1921.....                  | 778                              |
| Grapefruit, imports, statistics.....                           | 740, 757                         |
| Grapes—  |                                  |
| imports, statistics.....                                       | 740                              |
| shipments, 1919-1921, by States.....                           | 654                              |
| Grapevines, acreage in 1919.....                               | 467                              |
| Grasses—   |                                  |
| tame, acreage in 1919.....                                     | 452                              |
| use in rotation with wheat.....                                | 97                               |
| wild, salt, or prairie, acreage in 1919.....                   | 450                              |
| Grasshoppers, damage to wheat.....                             | 108, 109                         |
| Grazing—   |                                  |
| capacity of western ranges.....                                | 251-253                          |
| forest.....  | 57                               |
| Great Basin, wheat production.....                             | 91                               |
| Great Plains—  |                                  |
| wheat production.....  | 95, 96                           |
| wheat rotation.....  | 97                               |
| Growing season, average length.....                            | 419                              |
| Grubs, white, injury to corn crop, control studies.....        | 186-187                          |
| Gums, imports, statistics.....                                 | 739, 749                         |
| Hams and shoulders, exports, statistics.....                   | 759                              |
| Harvest—   |                                  |
| monthly, of crops, percentages.....                            | 774                              |
| order of precedence with grains.....                           | 100                              |
| Harvesters, wheat, methods of use.....                         | 92, 93                           |
| Harvester-thrasher, use in wheat harvest.....                  | 93                               |
| Harvesting corn, cutting with harvester.....                   | 180, 181                         |
| Hauling, by wagon and motor-truck, cost, etc., 1906, 1916..... | 791                              |
| Hawaii—  |                                  |
| sugar production 1913-1920.....                                | 861                              |
| sugar production 1856-1921.....                                | 657                              |

|   | Page.              |
|---|--------------------|
| Hay—  |                    |
| acre, labor and material requirements by States         | 814-815            |
| acreage—  |                    |
| 1919  | 447                |
| in South, 1879-1919                                     | 337                |
| cost of production per acre, by States                  | 814-815, 828       |
| exports, statistics                                     | 747, 749           |
| growing in Central Northwest                            | 105, 106           |
| imports, statistics                                     | 741, 749           |
| losses, causes and extent 1909-1920                     | 600                |
| market receipts, by months and years                    | 602                |
| prices, by States and by months                         | 595-601            |
| production—   |                    |
| and value by States                                     | 595-599            |
| 1919, by States   | 263-264            |
| per capita and yield per acre                           | 432                |
| shipments, by months, 1910-1921                         | 603                |
| statistics—   |                    |
| acreage, production, value, etc., 1849-1921             | 73, 80, 595-603    |
| summary, 1919, 1920, 1921                               | 770                |
| value of crop, comparison with wheat                    | 80                 |
| wild, production 1919, by States                        | 263                |
| yield and prices, by States                             | 598                |
| Hemp—   |                    |
| acreage in 1919   | 446                |
| imports, statistics                                     | 739, 753, 754, 766 |
| Hereford cattle, distribution                           | 242                |
| Hessian fly, damage to wheat                            | 108, 109           |
| Hides—  |                    |
| exports—  |                    |
| statistics  | 744                |
| world countries, 1909-1920                              | 681                |
| imports—  |                    |
| statistics  | 738, 755, 765      |
| world countries, 1909-1920                              | 681                |
| prices, Chicago, 1910-1921                              | 700                |
| Hog cholera, control progress                           | 46                 |
| Hogs—   |                    |
| condemnation at slaughter, 1907-1921                    | 735                |
| importance in consumption of corn                       | 164                |
| market receipts at stockyards, and slaughter, 1915-1921 | 715, 727-728, 735  |
| number—   |                    |
| and value, January 1, 1920                              | 470                |
| in world countries                                      | 675-680            |
| increase in South, 1880-1920                            | 338                |
| on farms, January 1, 1920                               | 483                |
| prices  | 723-725            |
| ratios with corn, 1910-1921                             | 729                |
| registered, on farms, January 1, 1920                   | 484                |
| statistics, number, value, imports, and exports         | 722-729            |
| value, comparison with cattle and sheep                 | 228                |
| weight 1921 and 12-year average at principal markets    | 729                |
| <i>See also Swine.</i>                                  |                    |
| Home economics, study                                   | 31                 |
| Homes, farm—  |                    |
| improvement by extension workers                        | 31                 |
| number reporting water supply                           | 506                |
| Homesteads, relation to wheat production, note          | 93                 |
| Honey—  |                    |
| exports, statistics                                     | 743                |
| imports, statistics                                     | 737                |
| reports semimonthly                                     | 40                 |

|  | Page.                 |
|--|-----------------------|
| Hops—  |                       |
| consumption by brewers 1910-1921                   | 636                   |
| exports, statistics                                | 747, 749, 752, 761    |
| imports, statistics                                | 741, 749, 754         |
| prices, by States and by months                    | 636-637               |
| production and value, by States                    | 636                   |
| statistics, acreage, production, value, etc.       | 635-637               |
| trade, international, by countries, 1910-1921      | 636, 637              |
| world production, 1895-1920, and by countries      | 635                   |
| Horse—   |                       |
| American utility type                              | 23                    |
| feeds, kinds and amounts per animal, by States     | 840                   |
| labor—   |                       |
| cost, as factor in wheat profits                   | 116, 117              |
| factor in wheat production                         | 120                   |
| Horses—  |                       |
| colts, on farms, January 1, 1920                   | 471                   |
| cost of keeping on farm                            | 805                   |
| exports, statistics                                | 743, 757              |
| imports, statistics                                | 737, 764              |
| number—  |                       |
| and value, January 1, 1920                         | 470                   |
| in world countries                                 | 675-680               |
| on farms, January 1, 1920                          | 472, 474              |
| prices   | 684-686, 689, 734     |
| receipts at principal markets                      | 686                   |
| statistics, number, value, imports and exports     | 684-689               |
| Horticultural Board, receipts in 1921              | 69                    |
| Husking, corn, from stalk, notes                   | 178, 192              |
| Idaho, wheat production periods                    | 90, 94                |
| Illinois—  |                       |
| cattle industry, historical notes                  | 233-235               |
| wheat production periods                           | 88, 93, 94, 96        |
| Implements, farm—                                  |                       |
| manufacture, 1920                                  | 795-798               |
| value on January 1, 1920                           | 494                   |
| Imports—   |                       |
| agricultural products, statistics                  | 737-743, 753-756, 769 |
| barley of world countries, 1911-1920               | 558                   |
| cattle, 1918-1920                                  | 737, 764              |
| coffee, 1909-1920, by countries                    | 669                   |
| corn—  |                       |
| for 1914   | 205                   |
| of world countries, 1909-1920                      | 519                   |
| cotton   | 393                   |
| cotton, 1866-1921                                  | 610, 616              |
| cottonseed oil—                                    |                       |
| by countries, 1909-1920                            | 613                   |
| 1913-1920, world countries                         | 800                   |
| flaxseed of world countries, 1911-1920             | 574-575               |
| hides and skins, 1909-1920, world countries        | 681                   |
| hogs, 1918-1920                                    | 787                   |
| hops, 1910-1921                                    | 636                   |
| horses, 1918-1920                                  | 737                   |
| linseed oil, 1913-1920, world countries            | 803                   |
| meat and meat products, 1911-1920, world countries | 682                   |
| mutton, 1910-1920, world countries                 | 718                   |
| oats of world countries, 1911-1920                 | 551                   |
| olive oil, 1913-1920, world countries              | 801                   |
| peanut oil, 1913-1921, world countries             | 802                   |
| peanuts, by countries                              | 646-647               |
| pork, 1910-1920, world countries                   | 729                   |
| potatoes—  |                       |
| for 1866-1921                                      | 583                   |
| world countries                                    | 590                   |
| rice of world countries, 1909-1920                 | 579                   |
| rye of world countries, 1911-1920                  | 565                   |

|  |                        |
|--|------------------------|
| Imports—Continued.                                     | Page.                  |
| sheep, 1918–1920                                       | 737                    |
| swine, 1918–1920                                       | 737                    |
| tea, by countries                                      | 668                    |
| vegetable oils, 1912–1921                              | 799                    |
| wheat—   |                        |
| for world countries, 1909–1920                         | 538                    |
| graphic showing  | 156, 157               |
| wool, 1909–1920, world countries                       | 722                    |
| Income—  |                        |
| farm, nature and uncertainty                           | 1–6                    |
| national, farmers' percentage                          | 1, 2                   |
| India—   |                        |
| agricultural production, comparison with United States | 407                    |
| cotton production                                      | 325                    |
| rubber, trade, international, 1909–1920, by countries  | 673                    |
| Indiana, wheat production periods                      | 89, 91                 |
| Insect, pest control studies                           | 28                     |
| Insecticide act, administration                        | 82                     |
| Insects, corn enemies, injuries, causes, and control   | 186–187                |
| Inspection—  |                        |
| food service work                                      | 40                     |
| meat, statistics, 1907–1921                            | 735–736                |
| wheat, discussion of details                           | 129–130                |
| Insurance, crop, discussion                            | 121                    |
| Interest rates—  |                        |
| on short-time loans, by States                         | 778                    |
| to farmers in Southern States                          | 368                    |
| Iowa—  |                        |
| crop selection, changes                                | 104                    |
| growing season and frost                               | 106                    |
| leading corn State, 1911–1920                          | 198                    |
| wheat production, periods                              | 88, 96                 |
| Ivory, vegetable, import, statistics                   | 739, 749               |
| Joint worm, damage to wheat                            | 108, 109               |
| Judgment notices, number filed during year             | 83                     |
| Jute, imports, statistics                              | 739, 753, 754, 766     |
| Kafir—   |                        |
| acre, labor and material requirements, by States       | 812                    |
| acreage in South, 1879–1919                            | 337                    |
| cost of production per acre by States                  | 812, 826               |
| Kafirs, statistics, summary, 1919, 1920, 1921          | 771                    |
| Kansas City—   |                        |
| freight rates on wheat                                 | 135                    |
| prices of wheat, discounts by grades                   | 144, 145               |
| Kansas—  |                        |
| loans to farmers, kinds of security                    | 121                    |
| wheat—   |                        |
| movement, remarks                                      | 133                    |
| productive periods                                     | 90, 91, 92, 93, 94, 96 |
| Karochi, freight rates on wheat                        | 136                    |
| Kids, number on farms and ranges, January 1, 1920      | 486                    |
| Labor, chore hours per farm, by States                 | 841                    |
| cost—  |                        |
| and requirements in baby beef production               | 267–268                |
| in cotton production                                   | 361, 362               |
| distribution by seasons in Cotton Belt                 | 345                    |
| expenditure for wages, per farm, in 1919               | 496                    |
| farm—  |                        |
| as factor in cost of wheat production                  | 120                    |
| power, cost comparisons of tractor and horse           | 805, 807               |
| relation to crop selection                             | 105                    |

|   |                    |
|---|--------------------|
| Labor—Continued.  |                    |
| farm—Continued.   | Page.              |
| supply and demand, 1919-1922  | 786                |
| wages, 1910-1921  | 784-785            |
| horse, chore hours per farm, by States  | 841                |
| influence on cost of corn production, studies   | 192-193            |
| wages on farms, comparison with corn prices, 1910-1921                                | 193                |
| wheat growing, as factor in profit making   | 115-118            |
| Laborers, farm—   |                    |
| decrease in number  | 5, 12              |
| hiring periods and percentages  | 785                |
| Lambs—  |                    |
| fattening, cost per head, by States   | 842-844            |
| number on farms, January 1, 1920  | 485                |
| registered, on farms January 1, 1920  | 484                |
| Land—   |                    |
| area in United States and uses and conditions   | 23                 |
| banks, interest on farm loan bonds  | 14                 |
| cost as factor in wheat profits   | 116, 118           |
| farm, location and description  | 422                |
| improved—   |                    |
| in farms  | 28, 423            |
| operation by tenants and croppers   | 499                |
| in harvested crops  | 424                |
| rents increase  | 10-11              |
| utilization study   | 22-24              |
| Lands—  |                    |
| acreage per capita  | 431                |
| crop, relation to population, 1850-1920   | 431                |
| farm—   |                    |
| increase in value   | 3, 4, 10, 24       |
| prices for wheat growing, note  | 118                |
| value per acre, January 1, 1920   | 492                |
| irrigated and irrigable, acreage in 1919  | 429                |
| plow, value, 1919-1922, by States   | 786                |
| relief map of United States   | 417                |
| use in 1920 and possible use  | 430                |
| wet, acreage needing drainage   | 428                |
| Lard—   |                    |
| exports, statistics   | 744, 751, 758, 759 |
| prices  | 731, 732           |
| Laws—   |                    |
| administration by Agriculture Department  | 31-33              |
| violation, cases in department  | 33                 |
| Leaf spot, angular, cotton disease, control   | 357                |
| Leaf worm, cotton, habits and control   | 354                |
| Legislation, aid for farmers  | 13-15              |
| Legumes—  |                    |
| acreage in South, 1879-1919   | 337                |
| annual, cut for hay, acreage in 1919  | 453                |
| growing in Cotton Belt  | 346                |
| hay production in 1919, by States   | 264                |
| use in rotation with wheat  | 97                 |
| LEIGHTY, C. E.—   |                    |
| C. R. BALL, O. C. STINE, and O. E. BAKER, article on "Wheat production and marketing" | 77-160             |
| C. W. WARBURTON, O. C. STINE, and O. E. BAKER, article on "The corn crop"             | 161-226            |
| Lemons—   |                    |
| exports, statistics   | 746                |
| imports, statistics   | 740, 755           |
| Lettuce, shipments, 1919-1921, by States  | 653                |
| Library, number of books and increase during year                                     | 20                 |
| Licorice root, imports, statistics  | 741, 749           |
| Light, relation to plant growth, studies  | 27                 |
| Linseed—  |                    |
| exports, statistics   | 761                |
| imports, statistics   | 767                |

## Linseed—Continued.

|  |               |
|--|---------------|
| oil—   | Page.         |
| exports, 1913-1920, world countries.....   | 803           |
| imports, 1913-1920, world countries.....   | 803           |
| production, imports and exports, 1912-1921.....  | 799           |
| Lint, cotton—  |               |
| five important types.....  | 328           |
| production, cost variations.....   | 358-362       |
| Linters—   |               |
| consumption, 1909-1921.....  | 393, 395      |
| production in 1899-1921, and uses.....   | 381-382       |
| removal from cottonseed.....   | 376, 381      |
| supply and distribution, 1905-1921.....  | 395           |
| Live stock—  |               |
| farm, number and value, January 1, 1920.....   | 470           |
| feed, use of corn.....   | 165           |
| marketings, 1900-1921.....   | 734           |
| owners' indemnity for tuberculous cattle.....  | 45            |
| prices—  |               |
| by age or class, 1916-1922.....  | 734           |
| encouragement.....   | 13            |
| products, sales, by monthly percentage.....  | 779           |
| sales—   |               |
| by farmers, monthly percentage.....  | 779           |
| by farmers, per cent of all receipts, by States.....   | 780           |
| slaughter under Federal inspection.....  | 735           |
| statistics, 1921.....  | 675-736       |
| value on farms, January 1, 1920.....   | 495           |
| values by States, comparisons.....   | 733           |
| Liverpool—   |               |
| freight rates on wheat.....  | 136, 137      |
| prices of wheat.....   | 145, 146      |
| Loans, farmers—  |               |
| in Southern States, forms and rates.....   | 367-369       |
| interest rates, by States.....   | 778           |
| Louisiana—   |               |
| cane-sugar production, 1911-1921.....  | 659           |
| interest rates on loans to farmers.....  | 363           |
| pink bollworm, control work.....   | 353           |
| Lumber—  |               |
| exports, statistics.....   | 745, 756, 763 |
| imports, statistics.....   | 740, 756, 768 |
| Macaroni, etc., imports, statistics.....   | 755           |
| Machinery, farm—   |               |
| manufacture, 1920.....   | 796-797       |
| value, January 1, 1920, and per farm.....  | 494           |
| Madison, forest-products laboratory.....   | 53            |
| Man labor—   |               |
| cost as factor in wheat profits.....   | 116           |
| factor in wheat production.....  | 120           |
| Manila hemp, imports, statistics.....  | 739, 753, 754 |
| Maple products, statistics, production, yield, price, etc.....   | 665-667       |
| Marketing—   |               |
| beef cattle, methods.....  | 277-280       |
| corn—  |               |
| crop, prices, etc., factors governing.....   | 195-203       |
| movement from farm.....  | 199-202       |
| cotton, and prices.....  | 385-390       |
| grain, studies.....  | 21-22         |
| importance.....  | 13-19         |
| problems, studies.....   | 23            |
| research work in.....  | 19-21         |
| wheat, and production of wheat, article by C. R. Ball, C. E. Leighty,<br>O. C. Stine, and O. E. Baker..... | 77-160        |



## Marketing—Continued.

|   |                         |
|---|-------------------------|
| wheat—  | Page.                   |
| discussion of factors, etc.   | 122-146                 |
| freight rates   | 135-137                 |
| movements from farm and exports   | 181-184                 |
| receipts and exports, graph   | 132                     |
| remarks   | 122, 180                |
| routes in 1839  | 88                      |
| Markets—  |                         |
| Bureau—   |                         |
| consolidation   | 16                      |
| contract designation by Secretary   | 34                      |
| receipts in 1921  | 69                      |
| cattle, receipts, location, etc.  | 280-281                 |
| corn, prices, etc., factors governing   | 195-208                 |
| cotton—   |                         |
| classification and location   | 383-385                 |
| prices by months  | 613-615                 |
| spot, location and functions  | 383-385                 |
| news service work   | 40                      |
| wheat, principal in 1869  | 92                      |
| Marquis wheat, popularity, note   | 123                     |
| Meade cotton, substitute for Sea Island   | 372                     |
| Meal—   |                         |
| cottonseed, manufacture   | 376                     |
| exports, statistics   | 747, 751                |
| imports, statistics   | 740, 741                |
| Meat—   |                         |
| animals. <i>See</i> Animals, meat; Beef cattle; Calves; Hogs; Lambs;                          |                         |
| Sheep.  |                         |
| consumption, per capita, 1900-1921  | 683                     |
| inspection—   |                         |
| law, administration   | 32                      |
| statistics, 1907-1921   | 735-736                 |
| work and reports on meat trade  | 40                      |
| statistics, production, imports, exports, and consumption, 1900-1921                          | 683                     |
| supply, relation to corn production   | 225-226                 |
| Meats—  |                         |
| exports—  |                         |
| statistics  | 744, 750, 751, 758, 759 |
| world countries, 1911-1920  | 682                     |
| imports—  |                         |
| statistics  | 738                     |
| world countries, 1911-1920  | 682                     |
| prices  | 730-731                 |
| quantity imported and condemned, 1914-1921  | 736                     |
| statistics, production and exports, 1909-1921   | 75, 76                  |
| MELOY, G. S., A. M. AGELASTO, C. B. DOYLE, and O. C. STINE, article on "The cotton situation" | 323-406                 |
| Michigan, wheat production periods  | 88, 91, 93              |
| Middlings, prices at Minneapolis, 1916-1921, by months  | 603                     |
| Milk—   |                         |
| cows. <i>See</i> Cows, milk.  |                         |
| evaporated, etc., exports, statistics   | 743                     |
| imports, statistics   | 737                     |
| prices, 1920-1921   | 701-702                 |
| uses, 1919-1921   | 707                     |
| Mills—  |                         |
| cotton consumption, 1876-1920   | 392, 393, 396           |
| cottonseed oil, products from seed  | 376, 399                |
| Milo—   |                         |
| acre, labor and material requirements, by States  | 812                     |
| cost of production per acre, by States  | 812, 826                |
| Milwaukee, wheat market   | 92                      |
| Minneapolis—  |                         |
| milling center and wheat selling  | 143                     |
| prices of wheat, discounts by grades  | 144                     |
| Minnesota, wheat production periods   | 90, 91, 92, 93, 94, 96  |

|   | Page.              |
|---|--------------------|
| Mississippi—  |                    |
| interest rates on loans to farmers.....                 | 368                |
| Valley, wheat production, note.....                     | 94                 |
| Missouri, wheat production periods.....                 | 88, 94             |
| Mohair, production and value, 1919.....                 | 486                |
| Moisture, relation to wheat production.....             | 107-108            |
| Molasses—   |                    |
| exports, statistics.....                                | 748, 749           |
| imports, statistics.....                                | 742, 749, 754, 757 |
| Montana, wheat production.....                          | 92                 |
| Mortgages, farm, extension.....                         | 15                 |
| Motor trucks—   |                    |
| cost of operation in Corn Belt.....                     | 807                |
| hauls, distance, load, and cost, 1906, 1918.....        | 791                |
| number on farms, by States.....                         | 789                |
| Mule colts, on farms, Jan. 1, 1920.....                 | 471                |
| Mules—  |                    |
| exports, statistics.....                                | 743                |
| number—   |                    |
| and value, Jan. 1, 1920.....                            | 470                |
| on farms, Jan. 1, 1920.....                             | 473                |
| numbers in world countries.....                         | 675-680            |
| prices.....   | 684-686, 689, 734  |
| statistics, number, value, imports, and exports.....    | 684-689            |
| Muskmelons, market, acreage, 1919.....                  | 490                |
| Mutton—   |                    |
| exports, 1910-1920, world countries.....                | 718                |
| imports, 1910-1920, world countries.....                | 718                |
| Naval stores, exports, statistics.....                  | 745, 762           |
| Navel orange, industry development.....                 | 19-21              |
| Nebraska—   |                    |
| leading corn State.....                                 | 198-199            |
| wheat-production periods.....                           | 90, 91, 93, 94, 96 |
| Negro, farmers, aid by extension workers.....           | 36                 |
| Negroes, owners of farms, January 1, 1920.....          | 501                |
| New Mexico, wheat production.....                       | 88, 90             |
| New Orleans, freight rates on wheat.....                | 135                |
| New York—   |                    |
| freight rates on wheat.....                             | 135-137            |
| prices of wheat.....                                    | 145, 146           |
| wheat-production periods.....                           | 87, 88, 89         |
| Nitrogen, atmospheric, fixing.....                      | 27                 |
| North Carolina, interest rates on loans to farmers..... | 368                |
| North Dakota—   |                    |
| growing season and frost.....                           | 106                |
| loans to farmers, kinds of security.....                | 121                |
| wheat-production periods.....                           | 94, 96             |
| Nursery stock—  |                    |
| exports, statistics.....                                | 749                |
| imports, statistics.....                                | 749                |
| Nuts—   |                    |
| acreage and value in 1919.....                          | 463                |
| exports, statistics.....                                | 747, 749           |
| imports, statistics.....                                | 741, 749, 753, 767 |
| Oats—   |                    |
| acre, labor and material requirements, by States.....   | 814                |
| acreage—  |                    |
| comparison with wheat.....                              | 99                 |
| graphic showing.....                                    | 102                |
| in 1919.....  | 441                |
| consumption in world countries, 1909-1918.....          | 580                |
| cost of production per acre by States.....              | 814, 831           |
| exports—  |                    |
| of world countries, 1911-1920.....                      | 551                |
| statistics.....   | 746                |
| growing in central Northwest.....                       | 104, 105           |
| imports—  |                    |
| world countries, 1911-1920.....                         | 551                |
| statistics.....   | 740, 753           |

|   | Page.                  |
|---|------------------------|
| Oats—Continued.   |                        |
| losses, causes and extent, 1909-1920                              | 546                    |
| prices at principal markets                                       | 546-547                |
| sowing dates, by States   | 775                    |
| statistics—   |                        |
| acreage, production, and exports, 1910-1921                       | 71, 72, 74             |
| acreage, production, value, etc.                                  | 539-551                |
| summary, 1919, 1920, 1921   | 770                    |
| value of crop, comparison with wheat                              | 80                     |
| weight per bushel, estimates 1902-1921                            | 778                    |
| world production and exports                                      | 781                    |
| yield and value per acre and price                                | 544                    |
| Ocean freight rates—  |                        |
| for grain   | 207-208                |
| on wheat  | 136, 137               |
| Ohio—   |                        |
| cattle industry, historical notes                                 | 283                    |
| Valley, wheat production  | 95                     |
| wheat production periods  | 87, 88, 89, 91, 93     |
| Oil—  |                        |
| cake—   |                        |
| exports, statistics   | 747, 751, 761          |
| imports, statistics   | 741                    |
| cottonseed, manufacture and value                                 | 376, 399-400           |
| See also Cottonseed oil.  |                        |
| linseed, prices in New York in 1910-1922                          | 573                    |
| mills, number in Cotton Belt, and products                        | 376                    |
| soy bean, imports, statistics                                     | 767                    |
| trade, international, 1909-1920, by countries                     | 670                    |
| Oil-cake meal, trade, international, 1909-1920, by countries      | 670                    |
| Oil meal, prices at New York, 1910-1922                           | 604                    |
| Oils—   |                        |
| exports, statistics   | 744, 761               |
| vegetable—  |                        |
| exports, statistics   | 747, 749, 762          |
| imports, statistics   | 741, 749, 767          |
| statistics, production, exports, imports, and international trade | 799-803                |
| Oklahoma—   |                        |
| cotton growing, development                                       | 354                    |
| interest rates on loans to farmers                                | 368                    |
| wheat production  | 96                     |
| Oleo oil, etc.—   |                        |
| exports, statistics   | 758                    |
| imports, statistics   | 738                    |
| Oleomargarine production, 1918-1920                               | 705                    |
| Olive oil—  |                        |
| exports, 1913-1920, world countries                               | 801                    |
| imports—  |                        |
| statistics  | 741, 754, 767          |
| world countries, 1913-1920  | 801                    |
| production, imports, and exports, 1912-1921                       | 799                    |
| Olives, imports, statistics                                       | 740                    |
| Onions—   |                        |
| cost of production per acre                                       | 829                    |
| imports, statistics   | 742, 755               |
| prices, by months and by States, 1910-1921                        | 650                    |
| production, acreage, and yield, by States                         | 650                    |
| shipments, 1917-1921, by States                                   | 651                    |
| statistics, acreage, production, prices, etc.                     | 72, 650-651            |
| Opium, imports, statistics  | 754                    |
| Orange, navel, industry development                               | 19-21                  |
| Oranges—  |                        |
| exports, statistics   | 746, 760               |
| imports, statistics   | 740, 755, 757          |
| production and value, 1915, 1921                                  | 633                    |
| Orchards, losses from codling moth                                | 41                     |
| Oregon, wheat production periods                                  | 88, 89, 90, 91, 94, 96 |

| Packers—   | Page.              |
|--|--------------------|
| act, administration .....                                    | 33-34              |
| supervision, by Government act .....                         | 14                 |
| Packing-house products—                                      |                    |
| exports, statistics .....                                    | 741, 749, 750, 751 |
| imports, statistics .....                                    | 738, 749           |
| Palm oil, imports, statistics .....                          | 741                |
| Palouse, wheat district, note .....                          | 96                 |
| Paper, making in Alaska .....                                | 59-60              |
| Pastures, improved, in farms .....                           | 425                |
| Peach trees, acreage in 1919 .....                           | 466                |
| Peaches—   |                    |
| prices, by States and by months .....                        | 630-631            |
| production—  |                    |
| and prices, by States .....                                  | 630-631            |
| in 1919 .....  | 466                |
| shipments, 1917-1921, by States .....                        | 631                |
| statistics, production, prices, shipments, etc. ....         | 630-631            |
| Peanut oil—  |                    |
| exports, 1913-1920, world countries .....                    | 802                |
| imports, 1913-1920, world countries .....                    | 802                |
| production, imports, and exports, 1912-1921 .....            | 799                |
| Peanuts—   |                    |
| acreage—   |                    |
| in 1919 .....  | 455                |
| in South, 1879-1919 .....                                    | 337                |
| exports, statistics .....                                    | 741, 747           |
| imports, statistics .....                                    | 741                |
| statistics—  |                    |
| acreage, production, value, etc. ....                        | 645-646            |
| production, 1910-1921 .....                                  | 73                 |
| trade, international, by countries .....                     | 646-647            |
| Pear trees, acreage in 1919 .....                            | 468                |
| Pears—   |                    |
| prices, by States and by months .....                        | 632, 633           |
| production and prices, by States .....                       | 632                |
| shipments, by States .....                                   | 633                |
| statistics, production, prices, shipments, etc. ....         | 632-633            |
| Peas—  |                    |
| cost of production per acre .....                            | 829                |
| field, acreage in 1919 .....                                 | 454                |
| market, acreage in 1919 .....                                | 461                |
| world production and acreage, by countries .....             | 642                |
| Pecans, acreage in 1919 .....                                | 468                |
| Pennsylvania, wheat production periods .....                 | 83                 |
| Pests—   |                    |
| cotton, description and control .....                        | 349-354            |
| eradication—   |                    |
| cooperation importance .....                                 | 46                 |
| need of research .....                                       | 42-44              |
| insect, control studies .....                                | 28                 |
| Philippines, sugar production, 1856-1921 .....               | 657                |
| Phosphoric acid, manufacture, new process .....              | 26                 |
| Pigs, number on farms in 1919 .....                          | 483                |
| Pine, white, blister rust destructiveness .....              | 42                 |
| Pineapples, imports, statistics .....                        | 740                |
| Plant—   |                    |
| diseases, control work .....                                 | 41                 |
| growth, relation to length of day .....                      | 27                 |
| quarantine act, administration .....                         | 32                 |
| Planting—  |                    |
| corn, dates, in various regions .....                        | 183, 184           |
| dates for certain crops .....                                | 775-776            |
| Plum trees, acreage in 1919 .....                            | 467                |
| Plums and prunes, imports, statistics .....                  | 755                |
| Population—  |                    |
| country, number and per cent of total, January 1, 1920 ..... | 502                |
| rural and urban, distribution .....                          | 415                |

|   |                    |
|---|--------------------|
| Population—Continued.                                       | Page.              |
| urban, number and per cent of total, January 1, 1920        | 504                |
| village, number and per cent of total, January 1, 1920      | 503                |
| Pork—   |                    |
| cost of production per 100 pounds, by States                | 845                |
| exports—  |                    |
| statistics  | 744, 750, 751, 759 |
| world countries, 1910-1920                                  | 729                |
| imports, world countries, 1910-1920                         | 729                |
| production, labor, and material requirements for 100 pounds | 845                |
| Porto Rico—   |                    |
| soil survey, areas mapped                                   | 27                 |
| sugar production, 1856-1921                                 | 657                |
| Potatoes—   |                    |
| acre, labor, and material requirements by States            | 810-811            |
| acreage in 1919   | 456                |
| condition for 1900-1921                                     | 585                |
| cost of production per acre, by States                      | 810-811, 823-824   |
| imports, statistics   | 742, 754           |
| losses, causes and extent, 1909-1920                        | 587                |
| prices, by States and by months                             | 583, 587-590       |
| shipments, by States, 1917-1921                             | 591                |
| statistics—   |                    |
| acreage, production, value, etc                             | 71, 72, 581-591    |
| summary, 1919, 1920, 1921                                   | 770                |
| stocks on January 1 and prices, 1915-1922                   | 588                |
| sweet. (See Sweet potatoes.)                                |                    |
| trade, international, exports, imports, etc                 | 590                |
| value of crop, comparison with wheat                        | 80                 |
| world production and exports                                | 781                |
| yields by countries and by States                           | 583, 585           |
| Poultry—  |                    |
| number and value, January 1, 1920                           | 470                |
| number on farms, January 1, 1920                            | 487                |
| Power, farm work, cost data                                 | 805-807            |
| Precipitation—  |                    |
| annual average  | 418                |
| relation to wheat production                                | 107-108            |
| Prices—   |                    |
| beef cattle, at Chicago, monthly averages                   | 292-304            |
| cattle, comparison with general commodity prices            | 304-305            |
| corn—   |                    |
| annual variations, studies                                  | 213-215            |
| fixing on Chicago market                                    | 217                |
| on farms, December 1, 1921, with comparisons                | 209-212            |
| seasonal fluctuations, studies                              | 212-213            |
| war period, with comparisons                                | 215-217            |
| cotton—   |                    |
| and supply in 1921  | 404                |
| variations  | 385-387, 388-390   |
| farm supplies, graphic showing of changes                   | 119                |
| farmers' supplies, table, 1909-1921                         | 782-783            |
| food crops, conditions determining                          | 2-3                |
| market, for corn, determination at Chicago                  | 217                |
| reduction for 10 leading crops                              | 12                 |
| variation for wheat   | 139-141            |
| wheat—  |                    |
| factors in determination                                    | 122, 137-146       |
| fixing on Liverpool market, note                            | 217                |
| fluctuation   | 139-142            |
| fluctuation in Civil War and World War                      | 147                |
| on principal markets  | 143-146            |
| relation to other prices in 1921, remarks                   | 141                |
| Primrose, growth, relation to length of day, illustration   | 27                 |
| Prune trees, acreage in 1919                                | 467                |
| Prunes—   |                    |
| exports, statistics   | 760                |

|  |                    |
|--|--------------------|
| <b>Publications—</b>   | <b>Page</b>        |
| Division, receipts in 1921   | 69                 |
| periodical, in service work  | 40                 |
| <b>Pulpwood—</b>   |                    |
| exports, statistics  | 746, 749, 756      |
| imports, statistics  | 740, 749, 756, 768 |
| international trade, 1909-1920, by countries                       | 674                |
| supplies in Alaska   | 59-60              |
| <b>Railroads, freight rates for grain</b>                          | 207-208            |
| <b>Railway freight tonnage, farm products and other, 1916-1921</b> | 790                |
| <b>Rain, relation to wheat production</b>                          | 107-108            |
| <b>Rainfall—</b>   |                    |
| Cotton Belt  | 341                |
| effect on corn yield   | 184-185            |
| July, relation to corn yield, 1888-1921                            | 184                |
| <b>Raisins—</b>  |                    |
| exports, statistics  | 746                |
| imports, statistics  | 740, 755           |
| <b>Range—</b>  |                    |
| cattle, development of industry                                    | 235-238            |
| western, carrying capacity for cattle and horses                   | 245-253            |
| <b>Ranges, cut-over pine lands, grazing capacity</b>               | 255-256            |
| <b>Reaper in use in harvesting flax and buckwheat</b>              | 89                 |
| wheat, development and use   | 87, 89, 92         |
| <b>Red River Valley, wheat production</b>                          | 93, 96             |
| <b>Regulatory work, relation to research work</b>                  | 33                 |
| <b>Rent, cost as factor in wheat production</b>                    | 120                |
| <b>Rents, farm lands, increase</b>                                 | 10-11              |
| <b>Research—</b>   |                    |
| agricultural, relation to marketing                                | 19-21              |
| department, object and cost  | 25-29, 67          |
| work—  |                    |
| relation to regulatory work  | 33                 |
| value as national investment                                       | 28-29              |
| workers, need of better salaries                                   | 62-64              |
| <b>Rice—</b>   |                    |
| acreage—   |                    |
| in 1919  | 446                |
| in South, 1879-1919  | 337                |
| consumption in world countries, 1909-1918                          | 580                |
| exports, statistics  | 747, 749, 752      |
| imports, statistics  | 741, 749, 754      |
| losses, causes and extent, 1909-1920                               | 579                |
| statistics—  |                    |
| acreage, production, value, etc                                    | 71, 72, 576-579    |
| summary, 1919, 1920, 1921  | 770                |
| world countries—   |                    |
| exports, 1909-1920   | 579                |
| imports, 1909-1920   | 579                |
| world production and exports                                       | 781                |
| yield and value per acre, and price                                | 578                |
| <b>Road—</b>   |                    |
| construction, record under Federal-aid road act                    | 47-51              |
| law, 1921, appropriation and provisions                            | 48-49              |
| projects, Federal aid, mileage and cost                            | 47-48              |
| work, use of surplus war materials                                 | 50, 51             |
| <b>Roads—</b>  |                    |
| Bureau, work in Alaska   | 60                 |
| construction—  |                    |
| investigation  | 28                 |
| research problems  | 50                 |
| Federal-aid—   |                    |
| expenditures, 1921   | 70                 |
| law, construction  | 47-51              |
| maintenance, difficulties  | 48, 50             |

|   |                     |
|---|---------------------|
| Roads—Continued.  |                     |
| materials—  | Page.               |
| investigations.....   | 28                  |
| transportation, improvement 1921.....                               | 48                  |
| Rodents, eradication work.....                                      | 46                  |
| Root rot, cotton, cause and results.....                            | 356                 |
| Root-knot, cotton, cause and prevention.....                        | 356                 |
| Rosin—  |                     |
| exports, statistics.....  | 745, 762            |
| trade, international 1909-1920, by countries.....                   | 671                 |
| Rotation—   |                     |
| cotton, use in control of cotton diseases.....                      | 356, 357            |
| wheat, systems for several climates.....                            | 97                  |
| Rotations, corn, with other crops.....                              | 176-178             |
| Rots—   |                     |
| corn—   |                     |
| injuries to corn, causes and control.....                           | 186                 |
| investigations.....   | 27                  |
| cotton-root, cause and results.....                                 | 356                 |
| Roughage, marketing through beef cattle.....                        | 227-228             |
| Rubber, India, international trade, 1909-1920, by countries.....    | 673                 |
| Rural life, standards.....  | 24, 66              |
| Russia, agricultural production, comparison with United States..... | 407                 |
| Rust—   |                     |
| cotton, cause and control.....                                      | 356                 |
| damage to wheat.....  | 110                 |
| effect on quality of wheat.....                                     | 127                 |
| wheat, spread by barberry.....                                      | 45                  |
| Rye—  |                     |
| acre, labor and material requirements, by States.....               | 814                 |
| acreage—  |                     |
| in 1919.....  | 443                 |
| comparison with wheat.....  | 99                  |
| graphic showing.....  | 103                 |
| consumption in world countries, 1909-1918.....                      | 580                 |
| cost of production per acre, by States.....                         | 814, 822            |
| exports, statistics.....  | 746                 |
| prices at Chicago.....  | 564                 |
| statistics, acreage, production, value, etc.....                    | 71, 72, 74, 559-565 |
| value of crop, comparison with wheat.....                           | 80                  |
| world countries—  |                     |
| exports, 1911-1920.....   | 565                 |
| imports, 1911-1920.....   | 565                 |
| world production and exports.....                                   | 781                 |
| yield and value per acre, and price.....                            | 563                 |
| Sago, imports, statistics.....                                      | 741, 749            |
| Sales, farm products, percentage of receipts by classes.....        | 779, 780            |
| Salaries, professional, standards outside department.....           | 63-64               |
| Seab, damage to wheat.....  | 110                 |
| Schools—  |                     |
| aid by department.....  | 30                  |
| receipts from forests.....  | 70                  |
| rural, study courses.....   | 30                  |
| Scientific—   |                     |
| work, director, appointment.....                                    | 29                  |
| workers, need for better salaries.....                              | 62-63               |
| Scientists, trained, value to Nation.....                           | 64                  |
| Sea-island cotton, description.....                                 | 327, 329            |
| Secretary of Agriculture. (See Agriculture.)                        |                     |
| Seed—   |                     |
| alfalfa, prices at Kansas City.....                                 | 608                 |
| clover—   |                     |
| statistics, production, 1910-1921.....                              | 73                  |
| statistics summary, 1919, 1920, 1921.....                           | 771                 |
| See also Clover seed.   |                     |

## Seed—Continued.

|  | Page.              |
|--|--------------------|
| cost—  |                    |
| as factor in wheat production  | 120                |
| as factor in wheat profits   | 117                |
| cotton, mixing as cause of deterioration of crop   | 401                |
| quantity per acre, various crops   | 776                |
| timothy. (See Timothy seed.)   |                    |
| wheat, treatment for bunt  | 110                |
| Seed-grain, loans to farmers in 1921   | 70                 |
| Seeds—   |                    |
| exports, statistics  | 748, 749, 761      |
| imports, statistics  | 742, 749, 767      |
| Self binder, wheat, use in threshing   | 92, 93             |
| Self-raker reaper. See Reaper.   |                    |
| Semolina, making and use   | 124                |
| Separator, grain, use in wheat harvest   | 92                 |
| Sheep—   |                    |
| condemnation at slaughter, 1907-1921   | 736                |
| exports, statistics  | 743                |
| imports, statistics  | 737                |
| number and value, January 1, 1920  | 470                |
| number on farms, January 1, 1920   | 485                |
| prices   | 710, 711-713, 734  |
| receipts at stockyards, and slaughter, 1915-1921   | 715-717, 735       |
| registered, on farms, January 1, 1920  | 484                |
| statistics, number, value, imports and exports   | 710-718            |
| value—   |                    |
| comparison with cattle and hogs  | 228                |
| with wool, comparison with cattle and hogs   | 228                |
| world countries, number  | 675-680            |
| Sheepskins, imports, statistics  | 738, 765           |
| SHEETS, E. W., O. E. BAKER, C. E. GIBSON, O. C. STINE, and R. H. WILCOX,<br>article on "Our beef supply" | 227-232            |
| Shorthorn cattle, distribution   | 243                |
| Sickle, use in wheat harvest   | 87, 88             |
| Silage—  |                    |
| acre, labor and material requirements, by States   | 808                |
| acreage of crops cut for   | 179                |
| corn with annual acreage for use   | 164-165, 178       |
| cost of production per acre, by States   | 808, 832           |
| crops cut for, acreage in 1919   | 436                |
| production, 1919, by States  | 262                |
| Silk—  |                    |
| exports, statistics  | 743                |
| imports, statistics  | 737, 749, 753, 764 |
| world production, 1909-1920, by countries  | 674                |
| Silos, early use, and increase   | 180                |
| Sirup—   |                    |
| cane, production, by States  | 660                |
| maple—   |                    |
| prices by months   | 667                |
| production, 1839-1921, and by States   | 665-666            |
| sorghum—   |                    |
| production and value by States   | 667                |
| statistics, production, 1910-1921  | 73                 |
| Sisal grass, imports, statistics   | 739, 766           |
| Skins—   |                    |
| exports, 1909-1920, world countries  | 681                |
| imports, 1909-1920, world countries  | 681                |
| horse—   |                    |
| exports, statistics  | 744                |
| imports, statistics  | 738                |
| Smith-Hughes Act, aid to agricultural education  | 30                 |
| Smith-Lever Act, funds expended in 1921  | 70                 |



|   | Page            |
|---|-----------------|
| Smut—   |                 |
| corn, loss from, 1917-1920.....                           | 185             |
| damage to wheat.....                                      | 110             |
| injury to corn, causes, and control studies.....          | 185             |
| Snap, cotton, description.....                            | 351             |
| Snow, relation to wheat production.....                   | 107-108         |
| Soil—   |                 |
| depletion by corn cropping, suggestions to growers.....   | 224             |
| fertility, relation of cattle industry.....               | 228             |
| regions, descriptions.....                                | 420             |
| regions of the Cotton Belt, map.....                      | 339             |
| survey, area mapped.....                                  | 27              |
| Soils—  |                 |
| Bureau of, receipts in 1921.....                          | 69              |
| colloidal particles, separation method.....               | 26              |
| Cotton Belt.....  | 340-341         |
| influence on corn production and yield.....               | 181             |
| Sorghum, sirup, production and acreage, by States.....    | 667             |
| Sorghums—   |                 |
| forage or fodder, acreage in 1919.....                    | 445             |
| grain—  |                 |
| acreage, in 1919.....                                     | 444             |
| acreage in South, 1879-1919.....                          | 337             |
| cost of production per acre, by States.....               | 812, 826        |
| labor and material requirements per acre, by States.....  | 812             |
| statistics, acreage, production, value, etc.....          | 71, 72, 644-645 |
| South America, cotton production.....                     | 327             |
| South Carolina interest rates on loans to farmers.....    | 368             |
| South Dakota, wheat production periods.....               | 94, 96          |
| Southern States, cotton crop importance.....              | 323-324         |
| Soy-bean oil, imports, statistics.....                    | 741, 747, 767   |
| Spices—   |                 |
| exports, statistics.....                                  | 748, 749        |
| imports, statistics.....                                  | 742, 749        |
| St. Louis, prices of wheat discounts by grades.....       | 144             |
| Standards, grade for cotton.....                          | 379             |
| Starch—   |                 |
| imports, statistics.....                                  | 742, 749        |
| exports, statistics.....                                  | 748, 749        |
| States Relations Service—                                 |                 |
| extension work in Alaska.....                             | 60              |
| receipts in 1921.....                                     | 69              |
| Statistics—   |                 |
| agricultural—   |                 |
| data, trends, 1899-1921.....                              | 787             |
| miscellaneous.....  | 770-803         |
| crops other than grain.....                               | 581-674         |
| farm animals and their products, 1921.....                | 675-736         |
| grain crops of 1921.....                                  | 507-580         |
| live stock, 1921.....                                     | 675-765         |
| tables and charts, use suggestion.....                    | 112             |
| truck crops, 1818-1921.....                               | 647-655         |
| use by farmers in seeking profits.....                    | 119             |
| vegetable oils, production, exports and imports, etc..... | 799-803         |
| world production and exports of 10 principal crops.....   | 781             |
| Staves, exports, statistics.....                          | 745             |
| Steers—   |                 |
| beef, conformation, requirements.....                     | 306-307         |
| fattening—  |                 |
| in Corn Belt, roughage requirements.....                  | 261             |
| in Cotton Belt, feed requirements.....                    | 257-258         |
| feeder, conformation, markets, and shipments.....         | 282-286         |
| piney-woods, value for lumbering in pine woods.....       | 255             |
| prices, comparison with beef prices.....                  | 297-300         |
| Stem rust, wheat, spread by barberry.....                 | 45              |

| STINE, O. C.—  | Page.                   |
|--|-------------------------|
| A. M. AGELOSTO, C. B. DOYLE, and G. S. MELOY, article on "The cotton situation".....         | 323-406                 |
| C. E. LEIGHTY, C. W. WARBURTON, and O. E. BAKER, article on "The corn crop".....             | 161-226                 |
| C. R. BALL, C. E. LEIGHTY, and O. E. BAKER, article on "Wheat production and marketing"..... | 77-100                  |
| E. W. SHEETS, O. E. BAKER, C. E. GIBSON, and R. H. WILCOX, article on "Our beef supply"..... | 227-322                 |
| Stockyards act, administration.....  | 33-34                   |
| Storage—   |                         |
| cold, space by States, 1921.....   | 793                     |
| grain, capacity of mills and elevators, by States, 1918.....                                 | 794                     |
| Strawberries—  |                         |
| acreage in 1919.....   | 469                     |
| prices at principal markets.....   | 653                     |
| shipments, 1917-1921, by States.....   | 653                     |
| Sugar—   |                         |
| beet—  |                         |
| production, 1861-1922.....   | 657-659                 |
| world production, by countries.....  | 663                     |
| cane—  |                         |
| production, 1856-1922.....   | 657                     |
| world production, by countries.....  | 663-664                 |
| crops, acreage in 1919.....  | 457                     |
| exports, statistics.....   | 748, 749, 752, 757      |
| grape, exports, statistics.....  | 751, 760                |
| Hawaii production.....   | 657, 661                |
| imports, statistics.....   | 742, 749, 754, 757, 767 |
| maple—   |                         |
| prices, by months.....   | 667                     |
| production, 1839-1921, by States.....  | 665-666                 |
| production, 1856-1922.....   | 657                     |
| statistics—  |                         |
| exports, 1910-1921.....  | 74                      |
| production, by-products, etc.....  | 651-664                 |
| summary, 1919, 1920, 1921.....   | 771                     |
| supply, per capita and total.....  | 660                     |
| trade, international, 1909-1920, by countries.....   | 662                     |
| world production and exports.....  | 781                     |
| Supplies, cost on farms, comparison with prices of cotton, 1910-1921.....                    | 364-365                 |
| Surplus crops, utilization studies.....  | 28                      |
| Surveys, cotton-production cost, charts.....   | 358-364                 |
| Sweet corn—  |                         |
| cost of production per acre.....   | 829                     |
| market acreage in 1919.....  | 462                     |
| Sweet potatoes—  |                         |
| cost of production per acre.....   | 829                     |
| prices, by States and by months.....   | 591-594                 |
| production and value by States.....  | 591-592                 |
| shipments, by States, 1917-1921.....   | 592                     |
| statistics, acreage, production, value, etc., 1849-1921.....                                 | 71, 72, 591-595         |
| yield and prices by States.....  | 593                     |
| Swine—   |                         |
| exports, statistics.....   | 743                     |
| imports, statistics.....   | 737                     |
| value on farms, 1910-1921.....   | 163                     |
| See also Hogs.   |                         |
| Sydney, freight rates on wheat.....  | 136                     |
| Tallow—  |                         |
| exports, statistics.....   | 744, 750                |
| imports, statistics.....   | 738                     |
| Tanning materials—   |                         |
| exports, statistics.....   | 749                     |
| imports, statistics.....   | 739, 745, 749           |

|  | Page.                        |
|--|------------------------------|
| Tea—   |                              |
| imports, statistics .....  | 742, 749, 753, 754, 767      |
| trade, international, 1900-1920, by countries .....                    | 668                          |
| Teachers, aid by department publications .....                         | 80                           |
| Telephones—  |                              |
| number of farms reporting, and per cent of all farms .....             | 506                          |
| use on farms, statistics .....   | 788                          |
| Tenancy, farm .....  | 498                          |
| Tennessee, interest rates on loans to farmers .....                    | 368                          |
| Texas—   |                              |
| cattle industry, historical notes .....                                | 233                          |
| cotton—  |                              |
| growing practices .....  | 347                          |
| growing, development .....   | 331-334                      |
| planting and picking dates .....                                       | 342                          |
| interest rates on loans to farmers .....                               | 368                          |
| pink bollworm, introduction and spread .....                           | 352-353                      |
| wheat production periods .....   | 89, 90, 94, 96               |
| Threshing—   |                              |
| cost—  |                              |
| as factor in wheat production .....                                    | 120                          |
| as factor in wheat profits .....                                       | 116                          |
| wheat, illustration .....  | 92                           |
| Tick, cattle, eradication progress .....                               | 44                           |
| Ties, railroad, exports, statistics .....                              | 745, 763                     |
| Timber—  |                              |
| exports, statistics .....  | 746, 756, 763                |
| growing—   |                              |
| forest lands .....   | 57                           |
| on private land, encouragement .....                                   | 54                           |
| imports, statistics .....  | 740                          |
| National forests, uses, statistics .....                               | 792                          |
| resources, investigations .....  | 54                           |
| Timothy—   |                              |
| acreage in 1919 .....  | 448                          |
| and clover, mixed, acreage in 1919 .....                               | 449                          |
| seed—  |                              |
| exports, statistics .....  | 748                          |
| prices, by months .....  | 606, 607                     |
| production, labor, and material requirements per acre, by States ..... | 816                          |
| receipts at Chicago, 1910-1922, by months .....                        | 608                          |
| Tobacco—   |                              |
| acre, labor, and material requirements, by States .....                | 812                          |
| acreage in 1919 .....  | 446                          |
| cost of production per acre, by States .....                           | 812, 826                     |
| exports, statistics .....  | 748, 749, 752, 757, 762      |
| imports, statistics .....  | 742, 749, 753, 754, 757, 763 |
| losses, causes and extent, 1909-1920 .....                             | 622                          |
| planting dates, by States .....  | 775-776                      |
| prices, by States and by months .....                                  | 621-623                      |
| production, acreage and value by States .....                          | 621                          |
| statistics—  |                              |
| acreage and production, 1910-1921 .....                                | 71, 73                       |
| acreage, production, value, etc .....                                  | 619-624                      |
| summary, 1919, 1920, 1921 .....  | 770                          |
| trade, international, by countries .....                               | 624                          |
| value of crop, comparison with wheat .....                             | 80                           |
| world production—  |                              |
| and exports .....  | 781                          |
| by countries .....   | 619-620                      |
| Tomatoes—  |                              |
| cost of production per acre .....                                      | 829                          |
| market, acreage in 1919 .....  | 462                          |
| prices, by States and by months .....                                  | 652                          |
| production, acreage, and yield, by States .....                        | 657                          |
| shipments, 1917-1921, by States .....                                  | 652                          |
| statistics, acreage, production prices, etc .....                      | 651-652                      |

|   | Page.        |
|---|--------------|
| Tonnage, railway freight, 1916-1921                           | 790          |
| Tools, farm, value, January 1, 1920, and per farm             | 494          |
| Traction engines—   |              |
| steam, manufacture, 1920                                      | 795          |
| use in threshing  | 92           |
| Tractor—  |              |
| cost—   |              |
| as factor in wheat profits                                    | 117          |
| of data from  | 805-807      |
| work, farms of various sizes                                  | 806          |
| Tractors—   |              |
| farm, power cost comparison with horse                        | 805-807      |
| gas, manufacture, 1920  | 795          |
| number of farms reporting, and per cent of total              | 505          |
| number on farms, by States                                    | 789          |
| Trade—  |              |
| routes in wheat shipments                                     | 156, 157     |
| wheat, international showing                                  | 156, 157     |
| Traffic, tests of experimental roads                          | 50           |
| Transportation—   |              |
| cotton, practices   | 390          |
| freight rates in wheat marketing                              | 135-137      |
| importance to farmers   | 9-10         |
| rail and ocean rates, for corn and wheat                      | 207-208      |
| wheat—  |              |
| marketing   | 88, 90, 92   |
| routes in 1839  | 88           |
| Trees, apple—   |              |
| acreage in 1919   | 464          |
| number of bearing age, acreage in 1919                        | 464          |
| Truck crops—  |              |
| cost of production per acre                                   | 829          |
| statistics, acreage, production, value, etc.                  | 647-654      |
| Tuberculosis, animal, eradication                             | 44-45        |
| Turkeys, prices, 1909-1921                                    | 709          |
| Turnips, prices, by months                                    | 652          |
| Turpentine—   |              |
| exports, statistics   | 745, 702     |
| trade, international, 1909-1920, by countries                 | 672          |
| United States—  |              |
| agricultural production, preeminence                          | 407          |
| agricultural products, exports, comparison with other nations | 407          |
| Upland cottons, description                                   | 329-330      |
| Utah wheat production periods                                 | 88, 90       |
| Vanilla beans, imports, statistics                            | 742, 749     |
| Veal, consumption per capita, 1907-1921                       | 316          |
| Vegetables—   |              |
| exports, statistics   | 748, 749     |
| home value in 1919  | 453          |
| imports, statistics   | 742-743, 740 |
| markets, receipts 1916-1921                                   | 652-656      |
| sale, acreage in 1919   | 459          |
| Vegetation, native of United States                           | 421          |
| Virginia—   |              |
| cattle industry, historical notes                             | 232          |
| wheat production, early period                                | 87           |
| wheat production periods                                      | 87, 88       |
| Vocational Education, Federal Board, cooperation              | 30           |
| Wages, farm—  |              |
| comparison with prices of cotton, 1910-1921                   | 364-365      |
| graphic showing of changes                                    | 119          |
| influence on cost of corn production                          | 192-193      |
| labor, 1916-1921  | 784-785      |
| reduction disproportionate                                    | 5, 12        |

## Wheat—Continued.

|  | Page.              |
|--|--------------------|
| production—Continued.  |                    |
| in world   | 81-84              |
| increase in 25 years   | 149-150            |
| increase in United States  | 85-97              |
| per capita, and yield per acre                                     | 432                |
| relation to World War, etc., review                                | 155-160            |
| surplus and deficiency   | 130                |
| world, graphs, 1891-1921   | 83                 |
| world, percentages for countries, map                              | 82                 |
| world, trend   | 84                 |
| profit in growing, comparison with corn                            | 104                |
| quality—   |                    |
| and receipts, graph  | 128                |
| variation, etc., discussion  | 127-130            |
| regions in United States of principal production, changes          | 88-96              |
| seed treatment for disease   | 110                |
| soft red winter, production, varieties, and use                    | 123, 125           |
| sowing dates, by States  | 775                |
| spring—  |                    |
| acreage in 1919  | 439                |
| area   | 101                |
| growing in relation to other crops                                 | 100                |
| statistics—  |                    |
| acreage, production, and exports, 1910-1921                        | 71, 72, 74         |
| acreage production, value, etc.                                    | 520-533            |
| production, graphic showing  | 86                 |
| production, value and exports                                      | 80                 |
| summary, 1919, 1920, 1921  | 770                |
| storage in dry climate, note                                       | 132                |
| value—   |                    |
| in terms of other goods, discussion                                | 147-148            |
| of crop with comparisons   | 80                 |
| on farms, 1910-1921  | 163                |
| values, comparison of purchasing power                             | 148                |
| weight per bushel, estimates 1902-1921                             | 778                |
| White Club, production and use                                     | 125                |
| winter—  |                    |
| acreage in 1919  | 438                |
| advantages in growing, etc.  | 100, 101           |
| cost variations, graphs, and discussion                            | 113                |
| world production and exports                                       | 781                |
| yield and value per acre, and price                                | 528                |
| WILCOX, R. H., E. W. SHEETS, O. E. BAKER, C. E. GIBBONS, and O. E. |                    |
| STINE, article on "Our beef supply"                                | 227-322            |
| Willamette Valley, wheat production                                | 90                 |
| Wilt, cotton, cause and prevention                                 | 355-356            |
| Wisconsin—   |                    |
| farm, aid by home demonstration work                               | 36-37              |
| Madison forest products laboratory                                 | 53                 |
| wheat production periods   | 88, 89, 93         |
| Wood—  |                    |
| consumption and production   | 54                 |
| exports, statistics  | 745, 749, 768      |
| imports, statistics  | 739-740, 749, 768  |
| pulp, trade, international, 1909-1920, by countries                | 674                |
| Woodlands, acreage in 1920   | 426-427            |
| Woodlots, acreage and value  | 54                 |
| Wool—  |                    |
| exports—   |                    |
| statistics   | 749                |
| world countries, 1909-1920   | 722                |
| goat, camel, etc., imports, statistics                             | 737                |
| imports—   |                    |
| statistics   | 737, 749, 753, 704 |
| world countries, 1909-1920   | 722                |

|   |         |
|---|---------|
| Wool—Continued.   | Page.   |
| prices.....   | 720-721 |
| production and value, 1919.....   | 486     |
| statistics—   |         |
| production, 1909-1921.....  | 76      |
| production, value, and international trade.....                           | 718-722 |
| world countries, 1910-1920.....   | 718     |
| Work stock, cost of keeping, relative importance of items, by States..... | 840     |
| Workers, department, educational advantages.....                          | 65-66   |
| World—  |         |
| production and export trade, 10 great crops.....                          | 781     |
| War—  |         |
| effect on wheat prices.....   | 139-141 |
| effect on wheat production.....   | 149     |
| Worm—   |         |
| corn-ear, injury to corn, control studies.....                            | 186-187 |
| corn-root, injuries and control studies.....                              | 187     |
| Yields, wheat, changes in 25 years in United States.....                  | 85-87   |
| <i>See also</i> Statistics of all crops.                                  |         |





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